

Strain identifier

BacDive ID: 2127 **DOI:** 10.13145/bacdive2127.20190402.4
Type strain: yes **Designation:** FDC 371
Culture col. no.: DSM 3260, ATCC 33238, CCUG 20446 B, NCTC 11489

Sections

[Name and taxonomic classification](#)
[Morphology and physiology](#)
[Culture and growth conditions](#)
[Isolation, sampling and environmental information](#)
[Application and interaction](#)
[Molecular biology](#)
[Strain availability](#)
[References](#)

Name and taxonomic classification

Ref.: 1331	Domain	Bacteria
Ref.: 1331	Phylum	Proteobacteria
Ref.: 1331	Class	Epsilonproteobacteria
Ref.: 1331	Order	Campylobacterales
Ref.: 1331	Family	Campylobacteraceae
Ref.: 1331	Genus	Campylobacter
Ref.: 1331	Species	Campylobacter rectus
Ref.: 1331	Full Scientific Name	Campylobacter rectus (Tanner et al. 1981) Vandamme et al. 1991
Ref.: 1331	Designation:	FDC 371
Ref.: 1331	Type strain:	yes

Prokaryotic Nomenclature Up-to-date (PNU)

Ref.: 20215	Domain	Bacteria
Ref.: 20215	Phylum	Proteobacteria
Ref.: 20215	Class	Epsilonproteobacteria
Ref.: 20215	Literature reference	Int. J. Syst. Evol. Microbiol. 56:2
Ref.: 20215	Family	Campylobacteraceae
Ref.: 20215	Genus	Campylobacter
Ref.: 20215	Taxonomical status	genus (AL)



Ref.: 20215	Literature reference	Int. J. Syst. Bacteriol. 30:225
Ref.: 20215	Species	Campylobacter rectus
Ref.: 20215	Taxonomical status	comb. nov. (VP)
Ref.: 20215	Literature reference	Int. J. Syst. Bacteriol. 41:88*
Ref.: 20215	Full Scientific Name	Campylobacter rectus (Tanner et al. 1981) Vandamme et al. 1991
Ref.: 20215	Synonym	Wolinella recta

Morphology and physiology

Ref.: 1331 **Incubation period** 3-7 days

Ref.: 47138 **Incubation period** 3 days

Ref.: 1331	Enzymes	Enzyme	Enzyme activity	EC number
		catalase	+	1.11.1.6

Ref.: 1331

API CAM

API ID	1295	1294	1293
URE	-	-	-
NIT	+	-	-
EST	+	+	-
HIP	-	-	-
GGT	-	-	-
TTC	+	-	-
PYRA	-	-	-
ArgA	-	+/-	+
AspA	+	+	+
PAL	-	-	+
H2S	+	-	-
GLU	-	-	-
SUT	-	-	-
NAL	-	-	-
CFZ	-	-	-
ACE	-	-	-
PROP	-	-	-
MLT	-	-	-
CIT	-	-	-
ERO	-	-	-

CAT	-	+	+
-----	---	---	---

Ref.: 1331 **Oxygen tolerance** anaerobe

Ref.: 47138 **Oxygen tolerance** anaerobe

Culture and growth conditions

Ref.: 1331 **Culture medium** CAMPYLOBACTER RECTUS MEDIUM (DSMZ Medium 338), 37°C, anaerobic

Ref.: 1331 **Culture medium growth** yes

Ref.: 1331 **Culture medium link** https://www.dsmz.de/microorganisms/medium/pdf/DSMZ_Medium338.pdf

Ref.: 38145 **Culture medium** MEDIUM 92 - for Campylobacter rectus and Campylobacter mucosalis

Ref.: 38145 **Culture medium growth** yes

Ref.: 38145 **Culture medium composition** Distilled water make up to (1000.000 ml);Columbia agar (39.000 g);Horseblood (100.000 ml);Growth supplement (4.000 ml);Formate solution - M00175 (0.250 ml)

Temperatures

Ref.: 1331

Ref.: 38145

Ref.: 47138

Kind of temperature	Temperature
growth	37 °C
growth	37 °C
growth	37 °C

Ref.: 1331 **Temperature range** mesophilic

Ref.: 38145 **Temperature range** mesophilic

Ref.: 47138 **Temperature range** mesophilic

Isolation, sampling and environmental information

Ref.: 1331 **Sample type/isolated from** human peridontal pocket

Ref.: 47138 **Sample type/isolated from** Human periodontal pocket

Ref.: 47138 **Sampling date** 1974

Ref.: 47138 **Geographic location (country and/or sea, region)** Boston

Ref.: 47138 **Country** USA

Ref.: 47138 **Continent** North America

Isolation sources categories

Cat1	Cat2	Cat3
#Host	#Human	-
#Host Body-Site	#Oral cavity and airways	#Periodontal pocket

Application and interaction

Ref.: 1331 **Biosafety level** 2 Risk group (German classification)

Molecular biology

Ref.: 1331 **GC-content** 42.0-46.0 mol%

	Sequence database	Sequence accession description	Sequence accession number	Sequence length(bp)	Associated NCBI tax ID	
Ref.: 20218	Marker Gene (DDBJ Direct submission)	Campylobacter rectus gene for S-layer protein, complete cds	AB001876	4450	203	*
Ref.: 20218	Marker Gene (GenBank Direct submission)	Campylobacter rectus S-layer-RTX protein (csxB) gene, complete cds; tRNA-Arg gene, complete sequence; and putative histidine kinase gene, partial cds	AF035192	5782	203	*
Ref.: 20218	Marker Gene (GenBank Direct submission)	Campylobacter rectus S-layer-RTX protein (csxA) gene, complete cds	AF035193	4649	203	*
Ref.: 20218	Marker Gene (EMBL Direct submission)	Sequence 1577 from Patent WO0123604	AX110844	809	203	*
Ref.: 20218	Marker Gene (EMBL Direct submission)	Sequence 1663 from Patent WO0123604	AX110930	791	203	*
Ref.: 20218	Marker Gene (GenBank Direct submission)	Campylobacter rectus strain ATCC 33238 60 kDa chaperonin (cpn60) gene, partial cds	DQ059427	555	203	*
Ref.: 20218	INSDC Sequence	SSH7 Campylobacter rectus 33238 subtracted library Campylobacter rectus genomic, genomic survey sequence	ET201890	296	203	*



Campylobacter rectus

Ref.: 20218	INSDC Sequence	SSH8 Campylobacter rectus 33238 subtracted library Campylobacter rectus genomic, genomic survey sequence	ET201891	943	203	*
Ref.: 20218	INSDC Sequence	SSH14 Campylobacter rectus 33238 subtracted library Campylobacter rectus genomic, genomic survey sequence	ET201892	450	203	*
Ref.: 20218	INSDC Sequence	SSH2 Campylobacter rectus 33238 subtracted library Campylobacter rectus genomic, genomic survey sequence	ET201893	906	203	*
Ref.: 20218	INSDC Sequence	SSH20 Campylobacter rectus 33238 subtracted library Campylobacter rectus genomic, genomic survey sequence	ET201894	1488	203	*
Ref.: 20218	INSDC Sequence	SSH32 Campylobacter rectus 33238 subtracted library Campylobacter rectus genomic, genomic survey sequence	ET201895	223	203	*
Ref.: 20218	INSDC Sequence	SSH33 Campylobacter rectus 33238 subtracted library Campylobacter rectus genomic, genomic survey sequence	ET201896	672	203	*
Ref.: 20218	INSDC Sequence	SSH35 Campylobacter rectus 33238 subtracted library Campylobacter rectus genomic, genomic survey sequence	ET201897	541	203	*
Ref.: 20218	INSDC Sequence	SSH36 Campylobacter rectus 33238 subtracted library Campylobacter rectus genomic, genomic survey sequence	ET201898	667	203	*
Ref.: 20218	INSDC Sequence	SSH42 Campylobacter rectus 33238 subtracted library Campylobacter rectus genomic, genomic survey sequence	ET201899	317	203	*
Ref.: 20218	INSDC Sequence	SSH43 Campylobacter rectus 33238 subtracted library Campylobacter rectus genomic, genomic survey sequence	ET201900	182	203	*



Campylobacter rectus

Ref.: 20218	INSDC Sequence	SSH46 Campylobacter rectus 33238 subtracted library Campylobacter rectus genomic, genomic survey sequence	ET201901	858	203	*
Ref.: 20218	INSDC Sequence	SSH52 Campylobacter rectus 33238 subtracted library Campylobacter rectus genomic, genomic survey sequence	ET201902	595	203	*
Ref.: 20218	INSDC Sequence	SSH54 Campylobacter rectus 33238 subtracted library Campylobacter rectus genomic, genomic survey sequence	ET201903	527	203	*
Ref.: 20218	INSDC Sequence	SSH60 Campylobacter rectus 33238 subtracted library Campylobacter rectus genomic, genomic survey sequence	ET201904	1058	203	*
Ref.: 20218	INSDC Sequence	SSH69 Campylobacter rectus 33238 subtracted library Campylobacter rectus genomic, genomic survey sequence	ET201905	557	203	*
Ref.: 20218	INSDC Sequence	SSH75 Campylobacter rectus 33238 subtracted library Campylobacter rectus genomic, genomic survey sequence	ET201906	620	203	*
Ref.: 20218	INSDC Sequence	SSH77 Campylobacter rectus 33238 subtracted library Campylobacter rectus genomic, genomic survey sequence	ET201907	674	203	*
Ref.: 20218	INSDC Sequence	SSH82 Campylobacter rectus 33238 subtracted library Campylobacter rectus genomic, genomic survey sequence	ET201908	321	203	*
Ref.: 20218	INSDC Sequence	SSH80 Campylobacter rectus 33238 subtracted library Campylobacter rectus genomic, genomic survey sequence	ET201909	536	203	*
Ref.: 20218	INSDC Sequence	SSH96 Campylobacter rectus 33238 subtracted library Campylobacter rectus genomic, genomic survey sequence	ET201910	545	203	*



Campylobacter rectus

Ref.: 20218	INSDC Sequence	SSH99 Campylobacter rectus 33238 subtracted library Campylobacter rectus genomic, genomic survey sequence	ET201911	657	203	*
Ref.: 20218	INSDC Sequence	SSH98 Campylobacter rectus 33238 subtracted library Campylobacter rectus genomic, genomic survey sequence	ET201912	506	203	*
Ref.: 20218	INSDC Sequence	SSH108 Campylobacter rectus 33238 subtracted library Campylobacter rectus genomic, genomic survey sequence	ET201913	477	203	*
Ref.: 20218	INSDC Sequence	SSH110 Campylobacter rectus 33238 subtracted library Campylobacter rectus genomic, genomic survey sequence	ET201914	215	203	*
Ref.: 20218	INSDC Sequence	SSH119 Campylobacter rectus 33238 subtracted library Campylobacter rectus genomic, genomic survey sequence	ET201915	449	203	*
Ref.: 20218	INSDC Sequence	SSH123 Campylobacter rectus 33238 subtracted library Campylobacter rectus genomic, genomic survey sequence	ET201916	772	203	*
Ref.: 20218	INSDC Sequence	SSH124 Campylobacter rectus 33238 subtracted library Campylobacter rectus genomic, genomic survey sequence	ET201917	335	203	*
Ref.: 20218	INSDC Sequence	SSH127 Campylobacter rectus 33238 subtracted library Campylobacter rectus genomic, genomic survey sequence	ET201918	346	203	*
Ref.: 20218	INSDC Sequence	SSH129 Campylobacter rectus 33238 subtracted library Campylobacter rectus genomic, genomic survey sequence	ET201919	466	203	*
Ref.: 20218	INSDC Sequence	SSH131 Campylobacter rectus 33238 subtracted library Campylobacter rectus genomic, genomic survey sequence	ET201920	730	203	*



Campylobacter rectus

Ref.: 20218	INSDC Sequence	SSH137 Campylobacter rectus 33238 subtracted library Campylobacter rectus genomic, genomic survey sequence	ET201921	687	203	*
Ref.: 20218	INSDC Sequence	SSH138 Campylobacter rectus 33238 subtracted library Campylobacter rectus genomic, genomic survey sequence	ET201922	526	203	*
Ref.: 20218	INSDC Sequence	SSH139 Campylobacter rectus 33238 subtracted library Campylobacter rectus genomic, genomic survey sequence	ET201923	620	203	*
Ref.: 20218	INSDC Sequence	SSH142 Campylobacter rectus 33238 subtracted library Campylobacter rectus genomic, genomic survey sequence	ET201924	768	203	*
Ref.: 20218	INSDC Sequence	SSH143 Campylobacter rectus 33238 subtracted library Campylobacter rectus genomic, genomic survey sequence	ET201925	621	203	*
Ref.: 20218	INSDC Sequence	SSH147 Campylobacter rectus 33238 subtracted library Campylobacter rectus genomic, genomic survey sequence	ET201926	1157	203	*
Ref.: 20218	INSDC Sequence	SSH148 Campylobacter rectus 33238 subtracted library Campylobacter rectus genomic, genomic survey sequence	ET201927	526	203	*
Ref.: 20218	INSDC Sequence	SSH150 Campylobacter rectus 33238 subtracted library Campylobacter rectus genomic, genomic survey sequence	ET201928	275	203	*
Ref.: 20218	INSDC Sequence	SSH155 Campylobacter rectus 33238 subtracted library Campylobacter rectus genomic, genomic survey sequence	ET201929	596	203	*
Ref.: 20218	INSDC Sequence	SSH157 Campylobacter rectus 33238 subtracted library Campylobacter rectus genomic, genomic survey sequence	ET201930	800	203	*



Campylobacter rectus

Ref.: 20218	INSDC Sequence	SSH160 Campylobacter rectus 33238 subtracted library Campylobacter rectus genomic, genomic survey sequence	ET201931	731	203	*
Ref.: 20218	INSDC Sequence	SSH162 Campylobacter rectus 33238 subtracted library Campylobacter rectus genomic, genomic survey sequence	ET201932	509	203	*
Ref.: 20218	INSDC Sequence	SSH170 Campylobacter rectus 33238 subtracted library Campylobacter rectus genomic, genomic survey sequence	ET201933	956	203	*
Ref.: 20218	INSDC Sequence	SSH181 Campylobacter rectus 33238 subtracted library Campylobacter rectus genomic, genomic survey sequence	ET201934	587	203	*
Ref.: 20218	INSDC Sequence	SSH184 Campylobacter rectus 33238 subtracted library Campylobacter rectus genomic, genomic survey sequence	ET201935	245	203	*
Ref.: 20218	INSDC Sequence	SSH187 Campylobacter rectus 33238 subtracted library Campylobacter rectus genomic, genomic survey sequence	ET201936	304	203	*
Ref.: 20218	INSDC Sequence	SSH189 Campylobacter rectus 33238 subtracted library Campylobacter rectus genomic, genomic survey sequence	ET201937	693	203	*
Ref.: 20218	INSDC Sequence	SSH55 Campylobacter rectus 33238 subtracted library Campylobacter rectus genomic, genomic survey sequence	ET201938	1176	203	*
Ref.: 20218	INSDC Sequence	SSH78 Campylobacter rectus 33238 subtracted library Campylobacter rectus genomic, genomic survey sequence	ET201939	943	203	*
Ref.: 20218	INSDC Sequence	SSH117 Campylobacter rectus 33238 subtracted library Campylobacter rectus genomic, genomic survey sequence	ET201940	937	203	*



Campylobacter rectus

Ref.: 20218	INSDC Sequence	crec_c_1 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629867	2479	203	*
Ref.: 20218	INSDC Sequence	crec_c_2 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629868	2252	203	*
Ref.: 20218	INSDC Sequence	crec_c_3 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629869	2215	203	*
Ref.: 20218	INSDC Sequence	crec_c_4 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629870	2033	203	*
Ref.: 20218	INSDC Sequence	crec_c_5 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629871	2010	203	*
Ref.: 20218	INSDC Sequence	crec_c_6 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629872	1985	203	*
Ref.: 20218	INSDC Sequence	crec_c_7 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629873	1980	203	*
Ref.: 20218	INSDC Sequence	crec_c_8 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629874	1903	203	*



Campylobacter rectus

Ref.: 20218	INSDC Sequence	crec_c_9 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629875	1754	203	*
Ref.: 20218	INSDC Sequence	crec_c_10 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629876	1737	203	*
Ref.: 20218	INSDC Sequence	crec_c_11 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629877	1650	203	*
Ref.: 20218	INSDC Sequence	crec_c_12 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629878	1635	203	*
Ref.: 20218	INSDC Sequence	crec_c_13 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629879	1632	203	*
Ref.: 20218	INSDC Sequence	crec_c_14 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629880	1598	203	*
Ref.: 20218	INSDC Sequence	crec_c_15 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629881	1589	203	*
Ref.: 20218	INSDC Sequence	crec_c_16 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629882	1583	203	*



Campylobacter rectus

Ref.: 20218	INSDC Sequence	crec_c_17 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629883	1565	203	*
Ref.: 20218	INSDC Sequence	crec_c_18 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629884	1512	203	*
Ref.: 20218	INSDC Sequence	crec_c_19 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629885	1510	203	*
Ref.: 20218	INSDC Sequence	crec_c_20 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629886	1507	203	*
Ref.: 20218	INSDC Sequence	crec_c_21 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629887	1479	203	*
Ref.: 20218	INSDC Sequence	crec_c_22 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629888	1469	203	*
Ref.: 20218	INSDC Sequence	crec_c_23 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629889	1463	203	*
Ref.: 20218	INSDC Sequence	crec_c_24 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629890	1444	203	*



Campylobacter rectus

Ref.: 20218	INSDC Sequence	crec_c_25 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629891	1438	203	*
Ref.: 20218	INSDC Sequence	crec_c_26 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629892	1432	203	*
Ref.: 20218	INSDC Sequence	crec_c_27 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629893	1428	203	*
Ref.: 20218	INSDC Sequence	crec_c_28 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629894	1425	203	*
Ref.: 20218	INSDC Sequence	crec_c_29 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629895	1415	203	*
Ref.: 20218	INSDC Sequence	crec_c_30 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629896	1414	203	*
Ref.: 20218	INSDC Sequence	crec_c_31 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629897	1411	203	*
Ref.: 20218	INSDC Sequence	crec_c_32 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629898	1403	203	*



Campylobacter rectus

Ref.: 20218	INSDC Sequence	crec_c_33 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629899	1397	203	*
Ref.: 20218	INSDC Sequence	crec_c_34 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629900	1360	203	*
Ref.: 20218	INSDC Sequence	crec_c_35 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629901	1356	203	*
Ref.: 20218	INSDC Sequence	crec_c_36 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629902	1356	203	*
Ref.: 20218	INSDC Sequence	crec_c_37 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629903	1355	203	*
Ref.: 20218	INSDC Sequence	crec_c_38 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629904	1355	203	*
Ref.: 20218	INSDC Sequence	crec_c_39 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629905	1354	203	*
Ref.: 20218	INSDC Sequence	crec_c_40 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629906	1341	203	*



Campylobacter rectus

Ref.: 20218	INSDC Sequence	crec_c_41 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629907	1339	203	*
Ref.: 20218	INSDC Sequence	crec_c_42 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629908	1324	203	*
Ref.: 20218	INSDC Sequence	crec_c_43 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629909	1319	203	*
Ref.: 20218	INSDC Sequence	crec_c_44 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629910	1317	203	*
Ref.: 20218	INSDC Sequence	crec_c_45 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629911	1311	203	*
Ref.: 20218	INSDC Sequence	crec_c_46 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629912	1309	203	*
Ref.: 20218	INSDC Sequence	crec_c_47 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629913	1298	203	*
Ref.: 20218	INSDC Sequence	crec_c_48 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629914	1289	203	*



Campylobacter rectus

Ref.: 20218	INSDC Sequence	crec_c_49 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629915	1287	203	*
Ref.: 20218	INSDC Sequence	crec_c_50 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629916	1281	203	*
Ref.: 20218	INSDC Sequence	crec_c_51 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629917	1281	203	*
Ref.: 20218	INSDC Sequence	crec_c_52 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629918	1273	203	*
Ref.: 20218	INSDC Sequence	crec_c_53 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629919	1269	203	*
Ref.: 20218	INSDC Sequence	crec_c_54 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629920	1268	203	*
Ref.: 20218	INSDC Sequence	crec_c_55 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629921	1268	203	*
Ref.: 20218	INSDC Sequence	crec_c_56 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629922	1265	203	*



Campylobacter rectus

Ref.: 20218	INSDC Sequence	crec_c_57 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629923	1263	203	*
Ref.: 20218	INSDC Sequence	crec_c_58 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629924	1259	203	*
Ref.: 20218	INSDC Sequence	crec_c_59 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629925	1259	203	*
Ref.: 20218	INSDC Sequence	crec_c_60 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629926	1258	203	*
Ref.: 20218	INSDC Sequence	crec_c_61 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629927	1255	203	*
Ref.: 20218	INSDC Sequence	crec_c_62 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629928	1254	203	*
Ref.: 20218	INSDC Sequence	crec_c_63 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629929	1250	203	*
Ref.: 20218	INSDC Sequence	crec_c_64 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629930	1250	203	*



Campylobacter rectus

Ref.: 20218	INSDC Sequence	crec_c_65 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629931	1245	203	*
Ref.: 20218	INSDC Sequence	crec_c_66 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629932	1244	203	*
Ref.: 20218	INSDC Sequence	crec_c_67 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629933	1239	203	*
Ref.: 20218	INSDC Sequence	crec_c_68 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629934	1237	203	*
Ref.: 20218	INSDC Sequence	crec_c_69 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629935	1234	203	*
Ref.: 20218	INSDC Sequence	crec_c_70 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629936	1233	203	*
Ref.: 20218	INSDC Sequence	crec_c_71 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629937	1232	203	*
Ref.: 20218	INSDC Sequence	crec_c_72 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629938	1227	203	*



Campylobacter rectus

Ref.: 20218	INSDC Sequence	crec_c_73 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629939	1227	203	*
Ref.: 20218	INSDC Sequence	crec_c_74 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629940	1218	203	*
Ref.: 20218	INSDC Sequence	crec_c_75 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629941	1212	203	*
Ref.: 20218	INSDC Sequence	crec_c_76 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629942	1210	203	*
Ref.: 20218	INSDC Sequence	crec_c_77 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629943	1210	203	*
Ref.: 20218	INSDC Sequence	crec_c_78 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629944	1209	203	*
Ref.: 20218	INSDC Sequence	crec_c_79 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629945	1205	203	*
Ref.: 20218	INSDC Sequence	crec_c_80 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629946	1203	203	*



Campylobacter rectus

Ref.: 20218	INSDC Sequence	crec_c_81 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629947	1199	203	*
Ref.: 20218	INSDC Sequence	crec_c_82 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629948	1198	203	*
Ref.: 20218	INSDC Sequence	crec_c_83 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629949	1195	203	*
Ref.: 20218	INSDC Sequence	crec_c_84 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629950	1189	203	*
Ref.: 20218	INSDC Sequence	crec_c_85 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629951	1189	203	*
Ref.: 20218	INSDC Sequence	crec_c_86 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629952	1189	203	*
Ref.: 20218	INSDC Sequence	crec_c_87 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629953	1184	203	*
Ref.: 20218	INSDC Sequence	crec_c_88 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629954	1184	203	*



Campylobacter rectus

Ref.: 20218	INSDC Sequence	crec_c_89 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629955	1179	203	*
Ref.: 20218	INSDC Sequence	crec_c_90 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629956	1176	203	*
Ref.: 20218	INSDC Sequence	crec_c_91 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629957	1175	203	*
Ref.: 20218	INSDC Sequence	crec_c_92 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629958	1172	203	*
Ref.: 20218	INSDC Sequence	crec_c_93 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629959	1169	203	*
Ref.: 20218	INSDC Sequence	crec_c_94 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629960	1169	203	*
Ref.: 20218	INSDC Sequence	crec_c_95 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629961	1166	203	*
Ref.: 20218	INSDC Sequence	crec_c_96 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629962	1164	203	*



Campylobacter rectus

Ref.: 20218	INSDC Sequence	crec_c_97 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629963	1163	203	*
Ref.: 20218	INSDC Sequence	crec_c_98 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629964	1161	203	*
Ref.: 20218	INSDC Sequence	crec_c_99 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629965	1159	203	*
Ref.: 20218	INSDC Sequence	crec_c_100 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629966	1159	203	*
Ref.: 20218	INSDC Sequence	crec_c_101 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629967	1158	203	*
Ref.: 20218	INSDC Sequence	crec_c_102 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629968	1157	203	*
Ref.: 20218	INSDC Sequence	crec_c_103 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629969	1151	203	*
Ref.: 20218	INSDC Sequence	crec_c_104 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629970	1148	203	*



Campylobacter rectus

Ref.: 20218	INSDC Sequence	crec_c_105 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629971	1145	203	*
Ref.: 20218	INSDC Sequence	crec_c_106 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629972	1144	203	*
Ref.: 20218	INSDC Sequence	crec_c_107 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629973	1143	203	*
Ref.: 20218	INSDC Sequence	crec_c_108 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629974	1140	203	*
Ref.: 20218	INSDC Sequence	crec_c_109 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629975	1137	203	*
Ref.: 20218	INSDC Sequence	crec_c_110 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629976	1131	203	*
Ref.: 20218	INSDC Sequence	crec_c_111 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629977	1130	203	*
Ref.: 20218	INSDC Sequence	crec_c_112 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629978	1128	203	*



Campylobacter rectus

Ref.: 20218	INSDC Sequence	crec_c_113 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629979	1123	203	*
Ref.: 20218	INSDC Sequence	crec_c_114 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629980	1123	203	*
Ref.: 20218	INSDC Sequence	crec_c_115 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629981	1123	203	*
Ref.: 20218	INSDC Sequence	crec_c_116 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629982	1122	203	*
Ref.: 20218	INSDC Sequence	crec_c_117 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629983	1121	203	*
Ref.: 20218	INSDC Sequence	crec_c_118 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629984	1117	203	*
Ref.: 20218	INSDC Sequence	crec_c_119 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629985	1113	203	*
Ref.: 20218	INSDC Sequence	crec_c_120 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629986	1113	203	*



Campylobacter rectus

Ref.: 20218	INSDC Sequence	crec_c_121 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629987	1112	203	*
Ref.: 20218	INSDC Sequence	crec_c_122 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629988	1112	203	*
Ref.: 20218	INSDC Sequence	crec_c_123 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629989	1109	203	*
Ref.: 20218	INSDC Sequence	crec_c_124 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629990	1105	203	*
Ref.: 20218	INSDC Sequence	crec_c_125 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629991	1098	203	*
Ref.: 20218	INSDC Sequence	crec_c_126 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629992	1095	203	*
Ref.: 20218	INSDC Sequence	crec_c_127 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629993	1093	203	*
Ref.: 20218	INSDC Sequence	crec_c_128 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629994	1091	203	*



Campylobacter rectus

Ref.: 20218	INSDC Sequence	crec_c_129 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629995	1090	203	*
Ref.: 20218	INSDC Sequence	crec_c_130 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629996	1088	203	*
Ref.: 20218	INSDC Sequence	crec_c_131 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629997	1087	203	*
Ref.: 20218	INSDC Sequence	crec_c_132 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629998	1085	203	*
Ref.: 20218	INSDC Sequence	crec_c_133 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET629999	1083	203	*
Ref.: 20218	INSDC Sequence	crec_c_134 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630000	1080	203	*
Ref.: 20218	INSDC Sequence	crec_c_135 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630001	1071	203	*
Ref.: 20218	INSDC Sequence	crec_c_136 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630002	1065	203	*



Campylobacter rectus

Ref.: 20218	INSDC Sequence	crec_c_137 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630003	1062	203	*
Ref.: 20218	INSDC Sequence	crec_c_138 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630004	1061	203	*
Ref.: 20218	INSDC Sequence	crec_c_139 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630005	1056	203	*
Ref.: 20218	INSDC Sequence	crec_c_140 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630006	1053	203	*
Ref.: 20218	INSDC Sequence	crec_c_141 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630007	1045	203	*
Ref.: 20218	INSDC Sequence	crec_c_142 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630008	1042	203	*
Ref.: 20218	INSDC Sequence	crec_c_143 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630009	1038	203	*
Ref.: 20218	INSDC Sequence	crec_c_144 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630010	1037	203	*



Campylobacter rectus

Ref.: 20218	INSDC Sequence	crec_c_145 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630011	1034	203	*
Ref.: 20218	INSDC Sequence	crec_c_146 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630012	1032	203	*
Ref.: 20218	INSDC Sequence	crec_c_147 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630013	1031	203	*
Ref.: 20218	INSDC Sequence	crec_c_148 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630014	1030	203	*
Ref.: 20218	INSDC Sequence	crec_c_149 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630015	1026	203	*
Ref.: 20218	INSDC Sequence	crec_c_150 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630016	1024	203	*
Ref.: 20218	INSDC Sequence	crec_c_151 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630017	1024	203	*
Ref.: 20218	INSDC Sequence	crec_c_152 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630018	1021	203	*



Campylobacter rectus

Ref.: 20218	INSDC Sequence	crec_c_153 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630019	1020	203	*
Ref.: 20218	INSDC Sequence	crec_c_154 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630020	1016	203	*
Ref.: 20218	INSDC Sequence	crec_c_155 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630021	1013	203	*
Ref.: 20218	INSDC Sequence	crec_c_156 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630022	1011	203	*
Ref.: 20218	INSDC Sequence	crec_c_157 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630023	1009	203	*
Ref.: 20218	INSDC Sequence	crec_c_158 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630024	1008	203	*
Ref.: 20218	INSDC Sequence	crec_c_159 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630025	1008	203	*
Ref.: 20218	INSDC Sequence	crec_c_160 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630026	1008	203	*



Campylobacter rectus

Ref.: 20218	INSDC Sequence	crec_c_161 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630027	1006	203	*
Ref.: 20218	INSDC Sequence	crec_c_162 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630028	1006	203	*
Ref.: 20218	INSDC Sequence	crec_c_163 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630029	1005	203	*
Ref.: 20218	INSDC Sequence	crec_c_164 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630030	1003	203	*
Ref.: 20218	INSDC Sequence	crec_c_165 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630031	1003	203	*
Ref.: 20218	INSDC Sequence	crec_c_166 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630032	1000	203	*
Ref.: 20218	INSDC Sequence	crec_c_167 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630033	998	203	*
Ref.: 20218	INSDC Sequence	crec_c_168 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630034	997	203	*



Campylobacter rectus

Ref.: 20218	INSDC Sequence	crec_c_169 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630035	995	203	*
Ref.: 20218	INSDC Sequence	crec_c_170 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630036	991	203	*
Ref.: 20218	INSDC Sequence	crec_c_171 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630037	990	203	*
Ref.: 20218	INSDC Sequence	crec_c_172 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630038	988	203	*
Ref.: 20218	INSDC Sequence	crec_c_173 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630039	986	203	*
Ref.: 20218	INSDC Sequence	crec_c_174 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630040	986	203	*
Ref.: 20218	INSDC Sequence	crec_c_175 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630041	984	203	*
Ref.: 20218	INSDC Sequence	crec_c_176 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630042	981	203	*



Campylobacter rectus

Ref.: 20218	INSDC Sequence	crec_c_177 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630043	980	203	*
Ref.: 20218	INSDC Sequence	crec_c_178 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630044	980	203	*
Ref.: 20218	INSDC Sequence	crec_c_179 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630045	979	203	*
Ref.: 20218	INSDC Sequence	crec_c_180 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630046	979	203	*
Ref.: 20218	INSDC Sequence	crec_c_181 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630047	977	203	*
Ref.: 20218	INSDC Sequence	crec_c_182 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630048	977	203	*
Ref.: 20218	INSDC Sequence	crec_c_183 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630049	975	203	*
Ref.: 20218	INSDC Sequence	crec_c_184 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630050	974	203	*



Campylobacter rectus

Ref.: 20218	INSDC Sequence	crec_c_185 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630051	973	203	*
Ref.: 20218	INSDC Sequence	crec_c_186 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630052	968	203	*
Ref.: 20218	INSDC Sequence	crec_c_187 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630053	966	203	*
Ref.: 20218	INSDC Sequence	crec_c_188 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630054	962	203	*
Ref.: 20218	INSDC Sequence	crec_c_189 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630055	961	203	*
Ref.: 20218	INSDC Sequence	crec_c_190 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630056	960	203	*
Ref.: 20218	INSDC Sequence	crec_c_191 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630057	955	203	*
Ref.: 20218	INSDC Sequence	crec_c_192 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630058	954	203	*



Campylobacter rectus

Ref.: 20218	INSDC Sequence	crec_c_193 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630059	953	203	*
Ref.: 20218	INSDC Sequence	crec_c_194 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630060	945	203	*
Ref.: 20218	INSDC Sequence	crec_c_195 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630061	942	203	*
Ref.: 20218	INSDC Sequence	crec_c_196 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630062	935	203	*
Ref.: 20218	INSDC Sequence	crec_c_197 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630063	934	203	*
Ref.: 20218	INSDC Sequence	crec_c_198 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630064	931	203	*
Ref.: 20218	INSDC Sequence	crec_c_199 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630065	931	203	*
Ref.: 20218	INSDC Sequence	crec_c_200 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630066	930	203	*



Campylobacter rectus

Ref.: 20218	INSDC Sequence	crec_c_201 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630067	926	203	*
Ref.: 20218	INSDC Sequence	crec_c_202 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630068	925	203	*
Ref.: 20218	INSDC Sequence	crec_c_203 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630069	924	203	*
Ref.: 20218	INSDC Sequence	crec_c_204 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630070	924	203	*
Ref.: 20218	INSDC Sequence	crec_c_205 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630071	920	203	*
Ref.: 20218	INSDC Sequence	crec_c_206 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630072	920	203	*
Ref.: 20218	INSDC Sequence	crec_c_207 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630073	914	203	*
Ref.: 20218	INSDC Sequence	crec_s_208 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630074	913	203	*



Campylobacter rectus

Ref.: 20218	INSDC Sequence	crec_c_209 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630075	912	203	*
Ref.: 20218	INSDC Sequence	crec_c_210 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630076	908	203	*
Ref.: 20218	INSDC Sequence	crec_c_211 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630077	906	203	*
Ref.: 20218	INSDC Sequence	crec_s_212 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630078	900	203	*
Ref.: 20218	INSDC Sequence	crec_c_213 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630079	900	203	*
Ref.: 20218	INSDC Sequence	crec_c_214 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630080	899	203	*
Ref.: 20218	INSDC Sequence	crec_s_215 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630081	898	203	*
Ref.: 20218	INSDC Sequence	crec_c_216 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630082	898	203	*



Campylobacter rectus

Ref.: 20218	INSDC Sequence	crec_c_217 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630083	896	203	*
Ref.: 20218	INSDC Sequence	crec_c_218 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630084	896	203	*
Ref.: 20218	INSDC Sequence	crec_c_219 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630085	895	203	*
Ref.: 20218	INSDC Sequence	crec_s_220 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630086	894	203	*
Ref.: 20218	INSDC Sequence	crec_s_221 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630087	894	203	*
Ref.: 20218	INSDC Sequence	crec_s_222 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630088	892	203	*
Ref.: 20218	INSDC Sequence	crec_c_223 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630089	891	203	*
Ref.: 20218	INSDC Sequence	crec_c_224 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630090	886	203	*



Campylobacter rectus

Ref.: 20218	INSDC Sequence	crec_c_225 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630091	886	203	*
Ref.: 20218	INSDC Sequence	crec_s_226 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630092	885	203	*
Ref.: 20218	INSDC Sequence	crec_s_227 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630093	884	203	*
Ref.: 20218	INSDC Sequence	crec_s_228 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630094	880	203	*
Ref.: 20218	INSDC Sequence	crec_c_229 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630095	873	203	*
Ref.: 20218	INSDC Sequence	crec_c_230 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630096	870	203	*
Ref.: 20218	INSDC Sequence	crec_c_231 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630097	869	203	*
Ref.: 20218	INSDC Sequence	crec_c_232 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630098	869	203	*



Campylobacter rectus

Ref.: 20218	INSDC Sequence	crec_c_233 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630099	867	203	*
Ref.: 20218	INSDC Sequence	crec_s_234 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630100	865	203	*
Ref.: 20218	INSDC Sequence	crec_s_235 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630101	865	203	*
Ref.: 20218	INSDC Sequence	crec_s_236 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630102	861	203	*
Ref.: 20218	INSDC Sequence	crec_c_237 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630103	860	203	*
Ref.: 20218	INSDC Sequence	crec_s_238 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630104	857	203	*
Ref.: 20218	INSDC Sequence	crec_c_239 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630105	856	203	*
Ref.: 20218	INSDC Sequence	crec_s_240 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630106	854	203	*



Campylobacter rectus

Ref.: 20218	INSDC Sequence	crec_s_241 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630107	853	203	*
Ref.: 20218	INSDC Sequence	crec_s_242 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630108	853	203	*
Ref.: 20218	INSDC Sequence	crec_s_243 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630109	852	203	*
Ref.: 20218	INSDC Sequence	crec_c_244 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630110	852	203	*
Ref.: 20218	INSDC Sequence	crec_s_245 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630111	852	203	*
Ref.: 20218	INSDC Sequence	crec_c_246 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630112	850	203	*
Ref.: 20218	INSDC Sequence	crec_c_247 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630113	848	203	*
Ref.: 20218	INSDC Sequence	crec_s_248 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630114	847	203	*



Campylobacter rectus

Ref.: 20218	INSDC Sequence	crec_s_249 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630115	846	203	*
Ref.: 20218	INSDC Sequence	crec_c_250 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630116	841	203	*
Ref.: 20218	INSDC Sequence	crec_s_251 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630117	841	203	*
Ref.: 20218	INSDC Sequence	crec_c_252 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630118	838	203	*
Ref.: 20218	INSDC Sequence	crec_s_253 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630119	835	203	*
Ref.: 20218	INSDC Sequence	crec_s_254 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630120	835	203	*
Ref.: 20218	INSDC Sequence	crec_c_255 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630121	834	203	*
Ref.: 20218	INSDC Sequence	crec_s_256 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630122	829	203	*



Campylobacter rectus

Ref.: 20218	INSDC Sequence	crec_c_257 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630123	828	203	*
Ref.: 20218	INSDC Sequence	crec_s_258 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630124	827	203	*
Ref.: 20218	INSDC Sequence	crec_s_259 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630125	826	203	*
Ref.: 20218	INSDC Sequence	crec_s_260 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630126	826	203	*
Ref.: 20218	INSDC Sequence	crec_s_261 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630127	822	203	*
Ref.: 20218	INSDC Sequence	crec_c_262 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630128	822	203	*
Ref.: 20218	INSDC Sequence	crec_c_263 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630129	821	203	*
Ref.: 20218	INSDC Sequence	crec_s_264 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630130	821	203	*



Campylobacter rectus

Ref.: 20218	INSDC Sequence	crec_s_265 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630131	820	203	*
Ref.: 20218	INSDC Sequence	crec_s_266 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630132	820	203	*
Ref.: 20218	INSDC Sequence	crec_s_267 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630133	819	203	*
Ref.: 20218	INSDC Sequence	crec_s_268 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630134	812	203	*
Ref.: 20218	INSDC Sequence	crec_s_269 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630135	808	203	*
Ref.: 20218	INSDC Sequence	crec_c_270 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630136	806	203	*
Ref.: 20218	INSDC Sequence	crec_c_271 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630137	804	203	*
Ref.: 20218	INSDC Sequence	crec_s_272 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630138	803	203	*



Campylobacter rectus

Ref.: 20218	INSDC Sequence	crec_s_273 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630139	802	203	*
Ref.: 20218	INSDC Sequence	crec_s_274 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630140	802	203	*
Ref.: 20218	INSDC Sequence	crec_c_275 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630141	801	203	*
Ref.: 20218	INSDC Sequence	crec_s_276 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630142	801	203	*
Ref.: 20218	INSDC Sequence	crec_c_277 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630143	801	203	*
Ref.: 20218	INSDC Sequence	crec_c_278 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630144	800	203	*
Ref.: 20218	INSDC Sequence	crec_s_279 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630145	799	203	*
Ref.: 20218	INSDC Sequence	crec_s_280 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630146	791	203	*



Campylobacter rectus

Ref.: 20218	INSDC Sequence	crec_s_281 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630147	790	203	*
Ref.: 20218	INSDC Sequence	crec_s_282 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630148	787	203	*
Ref.: 20218	INSDC Sequence	crec_c_283 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630149	786	203	*
Ref.: 20218	INSDC Sequence	crec_s_284 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630150	785	203	*
Ref.: 20218	INSDC Sequence	crec_s_285 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630151	783	203	*
Ref.: 20218	INSDC Sequence	crec_s_286 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630152	782	203	*
Ref.: 20218	INSDC Sequence	crec_s_287 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630153	778	203	*
Ref.: 20218	INSDC Sequence	crec_c_288 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630154	776	203	*



Campylobacter rectus

Ref.: 20218	INSDC Sequence	crec_c_289 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630155	773	203	*
Ref.: 20218	INSDC Sequence	crec_s_290 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630156	770	203	*
Ref.: 20218	INSDC Sequence	crec_c_291 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630157	769	203	*
Ref.: 20218	INSDC Sequence	crec_s_292 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630158	765	203	*
Ref.: 20218	INSDC Sequence	crec_c_293 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630159	758	203	*
Ref.: 20218	INSDC Sequence	crec_s_294 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630160	752	203	*
Ref.: 20218	INSDC Sequence	crec_c_295 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630161	741	203	*
Ref.: 20218	INSDC Sequence	crec_s_296 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630162	728	203	*



Campylobacter rectus

Ref.: 20218	INSDC Sequence	crec_s_297 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630163	728	203	*
Ref.: 20218	INSDC Sequence	crec_s_298 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630164	727	203	*
Ref.: 20218	INSDC Sequence	crec_s_299 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630165	727	203	*
Ref.: 20218	INSDC Sequence	crec_s_300 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630166	727	203	*
Ref.: 20218	INSDC Sequence	crec_s_301 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630167	716	203	*
Ref.: 20218	INSDC Sequence	crec_s_302 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630168	713	203	*
Ref.: 20218	INSDC Sequence	crec_c_303 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630169	713	203	*
Ref.: 20218	INSDC Sequence	crec_s_304 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630170	712	203	*



Campylobacter rectus

Ref.: 20218	INSDC Sequence	crec_s_305 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630171	708	203	*
Ref.: 20218	INSDC Sequence	crec_s_306 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630172	700	203	*
Ref.: 20218	INSDC Sequence	crec_s_307 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630173	697	203	*
Ref.: 20218	INSDC Sequence	crec_s_308 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630174	688	203	*
Ref.: 20218	INSDC Sequence	crec_c_309 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630175	686	203	*
Ref.: 20218	INSDC Sequence	crec_c_310 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630176	678	203	*
Ref.: 20218	INSDC Sequence	crec_s_311 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630177	676	203	*
Ref.: 20218	INSDC Sequence	crec_c_312 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630178	669	203	*



Campylobacter rectus

Ref.: 20218	INSDC Sequence	crec_s_313 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630179	652	203	*
Ref.: 20218	INSDC Sequence	crec_s_314 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630180	646	203	*
Ref.: 20218	INSDC Sequence	crec_s_315 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630181	646	203	*
Ref.: 20218	INSDC Sequence	crec_c_316 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630182	643	203	*
Ref.: 20218	INSDC Sequence	crec_s_317 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630183	626	203	*
Ref.: 20218	INSDC Sequence	crec_s_318 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630184	621	203	*
Ref.: 20218	INSDC Sequence	crec_s_319 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630185	616	203	*
Ref.: 20218	INSDC Sequence	crec_s_320 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630186	614	203	*



Campylobacter rectus

Ref.: 20218	INSDC Sequence	crec_s_321 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630187	600	203	*
Ref.: 20218	INSDC Sequence	crec_s_322 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630188	596	203	*
Ref.: 20218	INSDC Sequence	crec_c_323 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630189	589	203	*
Ref.: 20218	INSDC Sequence	crec_s_324 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630190	581	203	*
Ref.: 20218	INSDC Sequence	crec_c_325 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630191	580	203	*
Ref.: 20218	INSDC Sequence	crec_c_326 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630192	576	203	*
Ref.: 20218	INSDC Sequence	crec_s_327 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630193	565	203	*
Ref.: 20218	INSDC Sequence	crec_s_328 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630194	560	203	*



Campylobacter rectus

Ref.: 20218	INSDC Sequence	crec_s_329 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630195	524	203	*
Ref.: 20218	INSDC Sequence	crec_s_330 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630196	520	203	*
Ref.: 20218	INSDC Sequence	crec_c_331 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630197	520	203	*
Ref.: 20218	INSDC Sequence	crec_c_332 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630198	516	203	*
Ref.: 20218	INSDC Sequence	crec_s_333 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630199	510	203	*
Ref.: 20218	INSDC Sequence	crec_s_334 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630200	501	203	*
Ref.: 20218	INSDC Sequence	crec_c_335 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630201	495	203	*
Ref.: 20218	INSDC Sequence	crec_c_336 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630202	466	203	*



Campylobacter rectus

Ref.: 20218	INSDC Sequence	crec_c_337 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630203	463	203	*
Ref.: 20218	INSDC Sequence	crec_s_338 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630204	450	203	*
Ref.: 20218	INSDC Sequence	crec_s_339 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630205	446	203	*
Ref.: 20218	INSDC Sequence	crec_s_340 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630206	386	203	*
Ref.: 20218	INSDC Sequence	crec_s_341 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630207	363	203	*
Ref.: 20218	INSDC Sequence	crec_s_342 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630208	341	203	*
Ref.: 20218	INSDC Sequence	crec_s_343 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630209	337	203	*
Ref.: 20218	INSDC Sequence	crec_s_344 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630210	331	203	*



Campylobacter rectus

Ref.: 20218	INSDC Sequence	crec_s_345 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630211	315	203	*
Ref.: 20218	INSDC Sequence	crec_s_346 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630212	307	203	*
Ref.: 20218	INSDC Sequence	crec_s_347 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630213	251	203	*
Ref.: 20218	INSDC Sequence	crec_s_348 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630214	225	203	*
Ref.: 20218	INSDC Sequence	crec_s_349 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630215	216	203	*
Ref.: 20218	INSDC Sequence	crec_s_350 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630216	215	203	*
Ref.: 20218	INSDC Sequence	crec_s_351 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630217	209	203	*
Ref.: 20218	INSDC Sequence	crec_s_352 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630218	137	203	*



Campylobacter rectus

Ref.: 20218	INSDC Sequence	crec_s_353 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630219	136	203	*
Ref.: 20218	INSDC Sequence	crec_s_354 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630220	113	203	*
Ref.: 20218	INSDC Sequence	crec_s_355 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630221	111	203	*
Ref.: 20218	INSDC Sequence	crec_s_356 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630222	101	203	*
Ref.: 20218	INSDC Sequence	crec_s_357 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630223	98	203	*
Ref.: 20218	INSDC Sequence	crec_s_358 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630224	95	203	*
Ref.: 20218	INSDC Sequence	crec_s_359 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630225	84	203	*
Ref.: 20218	INSDC Sequence	crec_s_360 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630226	74	203	*



Campylobacter rectus

Ref.: 20218	INSDC Sequence	crec_s_361 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630227	72	203	*
Ref.: 20218	INSDC Sequence	crec_s_362 Campylobacter rectus ATCC 33238 genomic library in pSMART HC-kan Campylobacter rectus genomic, genomic survey sequence	ET630228	71	203	*
Ref.: 20218	Marker Gene (GenBank Direct submission)	Campylobacter rectus ATCC:33238 CheY gene, complete cds	EU119866	366	203	*
Ref.: 20218	Marker Gene (GenBank Direct submission)	Campylobacter rectus strain ATCC 33238 elongation factor Tu (tuf) gene, partial cds	JQ412935	787	203	*
Ref.: 20218	Marker Gene (GenBank Direct submission)	Campylobacter rectus strain ATCC 33238 16S ribosomal RNA gene, partial sequence	JX912524	1434	203	*
Ref.: 20218	Marker Gene (GenBank Direct submission)	Campylobacter rectus strain ATCC 33238 ATP synthase F1 complex alpha subunit (atpA) gene, complete cds	KF855295	1518	203	*
Ref.: 20218	INSDC Sequence	Campylobacter rectus, complete 16S ribosomal RNA	L04317	1459	203	*
Ref.: 1331	GenBank Direct submission	Campylobacter rectus strain CCUG 20446B 16S ribosomal RNA (rrs) gene, partial sequence	DQ174169	1339	203	

Strain availability

Ref.: 1331 **Culture collection no.** DSM 3260, ATCC 33238, CCUG 20446 B, NCTC 11489

Ref.: 1331 **Strain history** <- ATCC <- A.C.R. Tanner, FDC 371

Associated Passport(s) in StrainInfo

Ref.: 20218 6466 - <http://www.straininfo.net/strains/6466>

Ref.: 20218 6463 - <http://www.straininfo.net/strains/6463>

References



- Ref.: 1331 Leibniz Institut DSMZ-Deutsche Sammlung von Mikroorganismen und Zellkulturen GmbH; Curators of the DSMZ; DSM 3260
- Ref.: 20215 D.Gleim, M.Kracht, N.Weiss et. al.: Prokaryotic Nomenclature Up-to-date - compilation of all names of Bacteria and Archaea, validly published according to the Bacteriological Code since 1. Jan. 1980, and validly published nomenclatural changes since.
- Ref.: 20218 Verslyppe, B., De Smet, W., De Baets, B., De Vos, P., Dawyndt P. StrainInfo introduces electronic passports for microorganisms.. Syst Appl Microbiol. 37: 42-50 2014 (10.1016/j.syapm.2013.11.002, 24321274)
- Ref.: 38145 None; Curators of the CIP; None
- Ref.: 47138 Culture Collection University of Gothenburg (CCUG); Curators of the CCUG; CCUG 20446 B

*** These References are textmined**

[back to top](#)