

Strain identifier

BacDive ID: 1693 **DOI:** 10.13145/bacdive1693.20190402.4
Type strain: yes **Designation:** Ti
Culture col. no.: DSM 20456, ATCC 29521, JCM 1255

Sections

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Name and taxonomic classification

Ref.: 8828	Domain	Bacteria
Ref.: 8828	Phylum	Actinobacteria
Ref.: 8828	Class	Actinobacteria
Ref.: 8828	Order	Bifidobacteriales
Ref.: 8828	Family	Bifidobacteriaceae
Ref.: 8828	Genus	Bifidobacterium
Ref.: 8828	Species	Bifidobacterium bifidum
Ref.: 8828	Full Scientific Name	Bifidobacterium bifidum (Tissier 1900) Orla-Jensen 1924
Ref.: 8828	Designation:	Ti
Ref.: 8828	Type strain:	yes

Prokaryotic Nomenclature Up-to-date (PNU)

Ref.: 20215	Domain	Bacteria
Ref.: 20215	Phylum	Actinobacteria
Ref.: 20215	Class	Actinobacteria
Ref.: 20215	Literature reference	Int. J. Syst. Bacteriol. 47:483*
Ref.: 20215	Family	Bifidobacteriaceae
Ref.: 20215	Literature reference	Int. J. Syst. Bacteriol. 47:487*
Ref.: 20215	Genus	Bifidobacterium

Ref.: 20215	Taxonomical status	genus (AL)
Ref.: 20215	Literature reference	Int. J. Syst. Bacteriol. 30:225
Ref.: 20215	Species	Bifidobacterium bifidum
Ref.: 20215	Taxonomical status	comb. nov. (VP)
Ref.: 20215	Literature reference	Int. J. Syst. Evol. Microbiol. 9:2007
Ref.: 20215	Full Scientific Name	Bifidobacterium bifidum (Tissier 1900) Orla-Jensen 1924 emend. Nouioui et al. 2018

Morphology and physiology

Ref.: 8828

API 50CHac

API ID	2687	2686	2685	2684	2683	2682
Q	-	-	-	-	-	-
GLY	-	-	-	-	-	-
ERY	-	-	-	-	-	-
DARA	-	-	-	-	-	-
LARA	-	-	-	-	-	-
RIB	-	-	-	-	-	-
DXYL	-	-	-	-	-	-
LXYL	-	-	-	-	-	-
ADO	-	-	-	-	-	-
MDX	-	-	-	-	-	-
GAL	-	+	+	+	+	+/-
GLU	-	+	+	+	+	+
FRU	+	+	+	+	+	+
MNE	-	-	+/-	-	-	-
SBE	-	-	+/-	-	-	-
RHA	-	-	-	-	-	-
DUL	-	-	-	-	-	-
INO	-	-	-	-	-	-
MAN	-	-	-	-	-	-
SOR	-	-	-	-	-	-
MDM	-	-	-	-	-	-
MDG	-	-	-	-	-	-
NAG	-	-	-	-	-	-
AMY	-	-	-	-	-	-
ARB	-	-	-	-	-	-
ESC	+	+	+	+	+	-



SAL	-	-	-	-	-	-
CEL	-	-	-	-	-	-
MAL	-	-	+/-	-	-	-
LAC	-	+	+	+	+	+
MEL	-	+	+	+	+	+/-
SAC	-	-	+/-	-	-	-
TRE	-	-	-	-	-	-
INU	-	-	-	-	-	-
MLZ	-	-	-	-	-	-
RAF	-	-	-	-	-	-
AMD	-	-	-	-	-	-
GLYG	-	-	-	-	-	-
XLT	-	-	-	-	-	-
GEN	-	-	-	-	-	-
TUR	-	-	-	-	-	-
LYX	-	-	-	-	-	-
TAG	-	-	-	-	-	-
DFUC	-	-	-	-	-	-
LFUC	-	-	-	-	-	-
DARL	-	-	-	-	-	-
LARL	-	-	-	-	-	-
GNT	-	-	-	-	-	-
2KG	-	-	-	-	-	-
5KG	+	-	-	-	-	+/-

- Ref.: 8828 **Murein short key** A21.07
- Ref.: 8828 **Murein types** A4 β L-Orn-D-Ser-D-Asp
- Ref.: 8828 **Oxygen tolerance** anaerobe

Culture and growth conditions

- Ref.: 8828 **Culture medium** BIFIDOBACTERIUM MEDIUM (DSMZ Medium 58), 37°C, anaerobic
- Ref.: 8828 **Culture medium growth** yes
- Ref.: 8828 **Culture medium link** https://www.dsmz.de/microorganisms/medium/pdf/DSMZ_Medium58.pdf
- Ref.: 35445 **Culture medium** MEDIUM 20 - for Anaerobic bacteria



Ref.: 35445	Culture medium growth	yes						
Ref.: 35445	Culture medium composition	Agar (15.000 g);Glucose (5.000 g);Yeast extract (20.000 g);Tryptone (30.000 g);Cysteine hydrochloride (0.500 g);distilled water (1000.000 ml);Hemin solution -M00149 (25.000 ml)						
Ref.: 8828	Temperatures	<table border="1"><thead><tr><th>Kind of temperature</th><th>Temperature</th></tr></thead><tbody><tr><td>growth</td><td>37 °C</td></tr><tr><td>growth</td><td>37 °C</td></tr></tbody></table>	Kind of temperature	Temperature	growth	37 °C	growth	37 °C
Kind of temperature		Temperature						
growth		37 °C						
growth	37 °C							
Ref.: 35445								
Ref.: 8828	Temperature range	mesophilic						
Ref.: 35445	Temperature range	mesophilic						

Isolation, sampling and environmental information

Ref.: 8828	Sample type/isolated from	stool of breast-fed infant									
	Isolation sources categories	<table border="1"><thead><tr><th>Cat1</th><th>Cat2</th><th>Cat3</th></tr></thead><tbody><tr><td>#Host</td><td>#Human</td><td>#Child</td></tr><tr><td>#Host Body Product</td><td>#Gastrointestinal tract</td><td>#Feces (Stool)</td></tr></tbody></table>	Cat1	Cat2	Cat3	#Host	#Human	#Child	#Host Body Product	#Gastrointestinal tract	#Feces (Stool)
Cat1		Cat2	Cat3								
#Host		#Human	#Child								
#Host Body Product	#Gastrointestinal tract	#Feces (Stool)									

Application and interaction

Ref.: 8828	Biosafety level	1 Risk group (German classification)
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Molecular biology

	Sequence database	Sequence accession description	Sequence accession number	Sequence length(bp)	Associated NCBI tax ID	
Ref.: 20218	Marker Gene (DDBJ Direct submission)	Bifidobacterium bifidum rpoB gene for RNA polymerase beta chain, partial cds, strain: ATCC 29521	AB198730	129	500634	*
Ref.: 20218	Marker Gene (DDBJ Direct submission)	Bifidobacterium bifidum rpoB gene for RNA polymerase beta chain, partial cds, strain: ATCC 29521, rifaximin resistant clone	AB198731	129	500634	*
Ref.: 20218	Marker Gene (GenBank Direct submission)	Bifidobacterium bifidum strain ATCC 29521 L-lactate dehydrogenase gene, partial cds	AF261671	312	500634	*



Bifidobacterium bifidum

Ref.: 20218	Marker Gene (GenBank Direct submission)	Bifidobacterium bifidum strain ATCC 29521 Tuf gene, partial cds	AY372041	988	500634	*
Ref.: 20218	Marker Gene (GenBank Direct submission)	Bifidobacterium bifidum strain ATCC 29521 ATP synthase beta chain (atpD) gene, partial cds	AY487145	1120	500634	*
Ref.: 20218	Marker Gene (GenBank Direct submission)	Bifidobacterium bifidum strain ATCC 29521 bile salt hydrolase (bsh) gene, complete cds	AY604517	951	500634	*
Ref.: 20218	Marker Gene (GenBank Direct submission)	Bifidobacterium bifidum strain KCTC 3202 RNA polymerase beta subunit (rpoB) gene, partial cds	EU780710	315	1681	*
Ref.: 20218	Marker Gene (GenBank Direct submission)	Bifidobacterium bifidum DSM 20456 strain ATCC 29521 23S ribosomal RNA gene, partial sequence	GQ340907	488	500634	*
Ref.: 20218	Marker Gene (GenBank Direct submission)	Bifidobacterium bifidum UTP-monosaccharide-1-phosphate uridylyltransferase (ugpA) gene, complete cds	KC261357	1467	1681	*
Ref.: 20218	Marker Gene (GenBank Direct submission)	Bifidobacterium bifidum UDP-glucose-hexose-1-phosphate uridylyltransferase (galT1) gene, complete cds	KC261358	1251	1681	*
Ref.: 20218	Marker Gene (GenBank Direct submission)	Bifidobacterium bifidum UDP-glucose-hexose-1-phosphate uridylyltransferase (galT2) gene, complete cds	KC261359	1515	1681	*
Ref.: 20218	INSDC Sequence	B.bifidum small subunit ribosomal RNA gene	M38018	1532	500634	*
Ref.: 20218	INSDC Sequence	Bifidobacterium bifidum (ATCC 29521) 16S ribosomal RNA gene, partial	M84777	642	1681	*
Ref.: 20218	Marker Gene (GenBank Direct submission)	Bifidobacterium bifidum pyruvate kinase gene, partial cds	AF384982	337	1681	*
Ref.: 20218	Marker Gene (GenBank Direct submission)	Bifidobacterium bifidum strain DSM 20456 transaldolase gene, partial cds	AF417533	301	500634	*
Ref.: 20218	Marker Gene (GenBank Direct submission)	Bifidobacterium bifidum strain DSM 20456 transaldolase-like gene, partial sequence	AF417538	1090	500634	*



Bifidobacterium bifidum

Ref.: 20218	Marker Gene (GenBank Direct submission)	Bifidobacterium bifidum strain DSM 20456 putative xylulose 5-phosphate/fructose 6-phosphate phosphoketolase (xfp) gene, partial cds	AY377398	503	500634	*
Ref.: 20218	Marker Gene (GenBank Direct submission)	Bifidobacterium bifidum DSM 20456 16S ribosomal RNA gene, partial sequence	HM007578	1344	500634	*
Ref.: 20218	Marker Gene (GenBank Direct submission)	Bifidobacterium bifidum DSM 20456 23S ribosomal RNA gene, partial sequence	HM007609	2558	500634	*
Ref.: 20218	Marker Gene (GenBank Direct submission)	Bifidobacterium bifidum DSM 20456 = JCM 1255 16S ribosomal RNA gene and 16S-23S ribosomal RNA intergenic spacer, partial sequence	JQ347252	742	500634	*
Ref.: 20218	Marker Gene (GenBank Direct submission)	Bifidobacterium bifidum DSM 20456 = JCM 1255 bile salt hydrolase gene, partial cds	JQ696814	484	500634	*
Ref.: 20218	INSDC Sequence	Bifidobacterium bifidum 23S rRNA gene insertion sequence	M85095	105	1681	*
Ref.: 20218	INSDC Sequence	16S rRNA [Bifidobacterium bifidum, DSM 20456T, Genomic, 1532 nt]	S83624	1532	1681	*
Ref.: 20218	Marker Gene (GenBank Direct submission)	Bifidobacterium bifidum strain DSMZ 20456 S-ribosylhomocysteinase (luxS) gene, partial cds	EF042118	305	500634	*
Ref.: 20218	Marker Gene (DDBJ Direct submission)	Bifidobacterium bifidum gene for 16S rRNA, partial sequence, strain: JCM 1255	AB116283	477	500634	*
Ref.: 20218	Marker Gene (DDBJ Direct submission)	Bifidobacterium bifidum gene for 16S rRNA, partial sequence, strain: JCM 1255	AB507078	668	500634	*
Ref.: 20218	Marker Gene (GenBank Direct submission)	Bifidobacterium bifidum heat shock protein 60 (hsp60) gene, partial cds	AY004280	590	500634	*
Ref.: 20218	Marker Gene (GenBank Direct submission)	Bifidobacterium bifidum GroES gene, partial cds	AY585252	196	500634	*
Ref.: 20218	Marker Gene (GenBank Direct submission)	Bifidobacterium bifidum JCM 1255 DnaK (dnaK) gene, partial cds	AY642868	535	500634	*
Ref.: 20218	Marker Gene (GenBank Direct submission)	Bifidobacterium bifidum JCM 1255 GrpE (grpE) gene, partial cds	AY642888	177	500634	*



Bifidobacterium bifidum

Ref.: 20218	Marker Gene (GenBank Direct submission)	Bifidobacterium bifidum nonfunctional galacto-N-biose/lacto-N-biose I-binding protein (gltA) gene, complete cds	JF332150	1381	500634	*
Ref.: 20218	Marker Gene (GenBank Direct submission)	Bifidobacterium bifidum strain KCTC 3202 16S ribosomal RNA gene, partial sequence	GU361813	1480	1681	*
Ref.: 20218	Marker Gene (GenBank Direct submission)	Bifidobacterium bifidum strain KCTC 3202 heat shock protein 60 (hsp60) gene, partial cds	GU361836	604	1681	*
Ref.: 20218	Marker Gene (GenBank Direct submission)	Bifidobacterium bifidum strain KCTC 3202 16S ribosomal RNA gene, partial sequence	U25951	1488	1681	*
Ref.: 20218	Marker Gene (GenBank Direct submission)	Bifidobacterium bifidum KCTC 3202 16S rRNA gene	U25952	1488	1681	*
Ref.: 20218	Marker Gene (GenBank Direct submission)	Bifidobacterium bifidum RpoC (rpoC) gene, partial cds	DQ198389	695	1681	*
Ref.: 20218	Marker Gene (GenBank Direct submission)	Bifidobacterium bifidum strain LMG 11041 DnaB (dnaB) gene, partial cds	DQ234313	207	1681	*
Ref.: 20218	Marker Gene (GenBank Direct submission)	Bifidobacterium bifidum strain LMG 11041 DnaG (dnaG) gene, partial cds	DQ234355	370	1681	*
Ref.: 20218	Marker Gene (GenBank Direct submission)	Bifidobacterium bifidum strain LMG 11041 PurF (purF) gene, partial cds	DQ234402	446	1681	*
Ref.: 20218	Marker Gene (GenBank Direct submission)	Bifidobacterium bifidum DnaJ1 (dnaJ1) gene, partial cds	DQ256093	386	1681	*
Ref.: 20218	Marker Gene (DDBJ Direct submission)	Bifidobacterium bifidum gene for 16S rRNA, partial sequence, strain: NBRC 100015	AB681129	1453	1681	*
Ref.: 20218	Marker Gene (DDBJ Direct submission)	Bifidobacterium bifidum mar gene for monomeric aspartate racemase, complete cds	AB179841	825	1681	*
Ref.: 8828	INSDC (WGS)	Bifidobacterium bifidum ATCC 29521 = JCM 1255 = DSM 20456, whole genome shotgun sequencing project	JDUM00000000	50	500634	

Strain availability

Ref.: 8828 **Culture collection no.** DSM 20456, ATCC 29521, JCM 1255

Ref.: 8828 **Strain history** <- T. Mitsuoka <- Tissier, Ti

Associated Passport(s) in StrainInfo

Ref.: 20218 5383 - <http://www.straininfo.net/strains/5383>

Ref.: 20218 5377 - <http://www.straininfo.net/strains/5377>

Ref.: 20218 5385 - <http://www.straininfo.net/strains/5385>

References

Ref.: 8828 Leibniz Institut DSMZ-Deutsche Sammlung von Mikroorganismen und Zellkulturen GmbH;
Curators of the DSMZ; DSM 20456

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.: 35445 None; Curators of the CIP; None

*** These References are textmined**

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