LanM

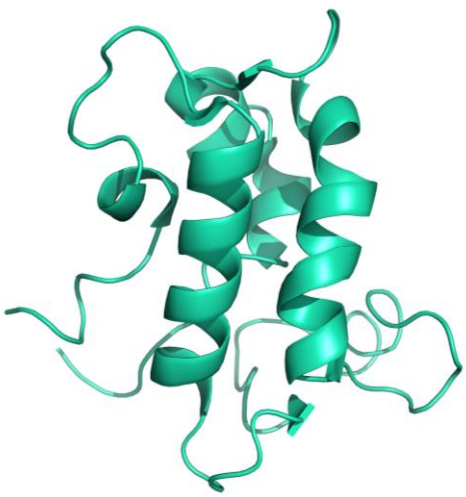
Cat. no. P2020-126

Product Information

Protein:	lanM (~ 14.9 kDa)
Uniprot#:	B1ZIE8
Sequence:	MAFRLSSAVLLAALVAAPAYAAPTTTTKVDIAAFDPDKDGTIDLKEALAAGSAAFDKLDP DKDGTLDAKELKGRVSEADLKKLDPDNDGTLDKKEYLAAVEAQFKAANPDNDGTIDAREL ASPAGSALVNLIR Methionine at pos. 1 present due to cloning constraints, C-terminal His-tag not shown in sequence.
Source:	Recombinantly expressed in *E. coli*.
Tag(s):	His-tag, C-terminal
Purification:	Insoluble purified by affinity chromatography containing urea, followed by refolding and buffer exchange by dialysis.
Formulation:	PBS; pH 7.4. Liquid, stored and shipped at -80 °C.
Purity:	> 95 % (will be determined by densitometry of Coomassie stained gel, example next page)
Concentration:	Will be determined by BCA-Assay.
Long-term storage:	No recommendations.

Background Information:

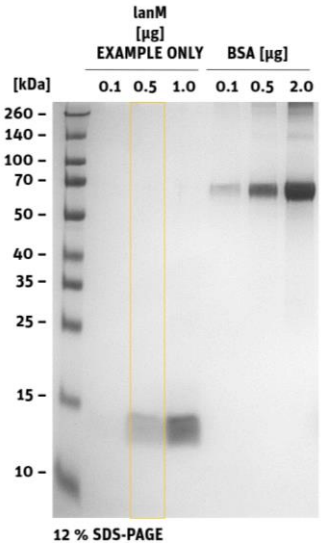
Lanmodulin (LanM) is a bacterial protein exhibiting metal-binding properties. It binds rare-earth elements (REEs) with very high affinity.
Lanthanides (Lns) are essential cofactors in certain enzymes. Lanmodulin (LanM) is a metal binding protein found in several lanthanide-utilizing, methylotrophic bacteria like Methylorubrum sp.
The protein exhibits unique metal-binding properties and binds rare-earth elements (REEs) with very high affinity, often better than many synthetic chelators. LanM-REE complexes are stable at extreme conditions like high temperature, repeated acid treatments down to pH 2.5 and up to molar amounts of competing non-REE metal ions.
Therefore, lanmodulin could be used even in harsh chemical processes for selective recovery of a broad range of REE from precumbustion coal and electronic waste leachates.



Structural model of LanM

Product Information

Quality Information (provided for each lot):



SDS-PAGE/Coll.Coomassie

	Area	Percent
1	66.657	0.364
2	37.364	0.204
3	18195.619	99.432

Histogram (of marked lane in gel picture)