PsiMP glycosidase

Cat. no. P2020-109

Product Information

Protein:	PsiMP glycosidase (~ 35.2 kDa)
Uniprot#:	P33025
Sequence:	MSELKISPELLQISPEVQDALKNKKPVVALESTIISHGMPFPQNAQTAIEVEETIRKQGA VPATIAIIGGVMKVGLSKEEIELLGREGHNVTKVSRRDLPFVVAAGKNGATTVASTMIIA ALAGIKVFATGGIGGVHRGAEHTFDISADLQELANTNVTVVCAGAKSILDLGLTTEYLET FGVPLIGYQTKALPAFFCRTSPFDVSIRLDSASEIARAMVVKWQSGLNGGLVVANPIPEQ FAMPEHTINAAIDQAVAEAEAQGVIGKESTPFLLARVAELTGGDSLKSNIQLVFNNAILA SEIAKEYQRLAG
	Methionine at pos. 1 might be present due to cloning constraints, N-terminal His-tag not shown in sequence.
Source:	Recombinantly expressed in *E. coli*.
Tag(s):	His-tag, N-terminal
Purification:	Purified by affinity chromatography and subsequent buffer exchange.
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:

The PsiMP glycosidase biologically has a cleavage function and catalyzes the reversible cleavage of the C-C glycoside bond to form ribose-5-phosphate and uracil. PsiMP glycosidase, together with the enzyme pseudouridine kinase, is responsible for the degradation of pseudouridine in *E. coli*. These enzymes are encoded by separate genes in bacterial genomes. PsiMP glycosidase is encoded by the *yeiN* gene, and pseudouridine kinase is encoded by the *yeiC* gene. Both genes belong to the same operon. In humans and other higher organisms, pseudouridine kinase and PsiMP glycosidase are not found. However, they are present in some eukaryotes as the only bifunctional enzymes.

In the process of pseudouridine degradation, when pseudouridine kinase phosphorylates pseudouridine, pseudouridine 5'-phosphate (PsiMP) is formed as a degradation product of RNAs. PsiMP is a non-classical nucleoside that has a glycosidic C-C bond and is present in human urine.
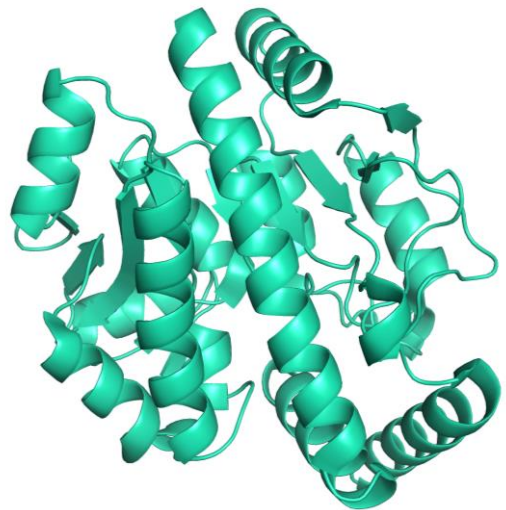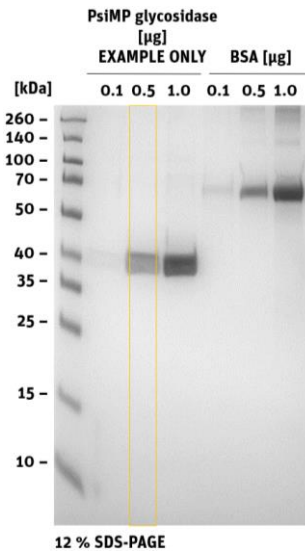
Structural model of the PsiMP glycosidase (pdb code:4GIL).

Product Information

Quality Information (provided for each lot):

SDS-PAGE/Coll.Coomassie

	Area	Percent
1	246.627	1.367
2	17797.569	98.633

Histogram (of marked lane in gel picture)