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PUS10 Blocking Peptide (N-term)

Synthetic peptide
Catalog # BP19991a

Specification

PUS10 Blocking Peptide (N-term) - Product Information

Primary Accession	Q3MIT2
Other Accession	NP_653310.2

PUS10 Blocking Peptide (N-term) - Additional Information

Gene ID 150962

Other Names
Putative tRNA pseudouridine synthase Pus10, 5499-, Coiled-coil domain-containing protein 139, tRNA pseudouridine 55 synthase, Psi55 synthase, tRNA pseudouridylate synthase, tRNA-uridine isomerase, PUS10, CCDC139, DOBI

Target/Specificity
The synthetic peptide sequence is selected from aa 67-78 of HUMAN PUS10

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

PUS10 Blocking Peptide (N-term) - Protein Information

Name PUS10 (HGNC:26505)

Function
Protein with different functions depending on its subcellular location: involved in miRNA processing in the nucleus and acts as a tRNA pseudouridylate synthase in the cytoplasm (PubMed:31819270, PubMed:33023933). In the cytoplasm, acts as a pseudouridylate synthase by catalyzing synthesis of pseudouridine(54) and pseudouridine(55) from uracil-54 and uracil-55, respectively, in the psi GC loop of a subset of tRNAs (PubMed:30530625, PubMed:31819270, PubMed:33023933). tRNA pseudouridylate synthase activity is enhanced by the presence of 1- methyladenosine at position 53-61 of tRNAs (PubMed:30530625). Does not

show tRNA pseudouridylate synthase activity in the nucleus (PubMed:33023933). In the nucleus, promotes primary microRNAs (pri- miRNAs) processing independently of its RNA pseudouridylate synthase activity (PubMed:31819270). Binds pri-miRNAs (PubMed:31819270). Modulator of TRAIL/TNFSF10-induced cell death via activation of procaspase-8 and BID cleavage (PubMed:14527409, PubMed:19712588). Required for the progression of the apoptotic signal through intrinsic mitochondrial cell death (PubMed:19712588).

Cellular Location
Nucleus. Cytoplasm Mitochondrion. Note=Localizes mainly in the nucleus (Probable) (PubMed:31819270). tRNA pseudouridylate synthase activity is restricted to the cytoplasm (PubMed:31819270). Translocates from nucleus to mitochondria during TRAIL-induced apoptosis (PubMed:28981101).

PUS10 Blocking Peptide (N-term) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

PUS10 Blocking Peptide (N-term) - Images

PUS10 Blocking Peptide (N-term) - Background

Pseudouridination, the isomerization of uridine to pseudouridine, is the most common posttranscriptional nucleotide modification found in RNA and is essential for biologic functions such as spliceosome biogenesis. Pseudouridylate synthases, such as PUS10, catalyze pseudouridination of structural RNAs, including transfer, ribosomal, and splicing RNAs. These enzymes also act as RNA chaperones, facilitating the correct folding and assembly of tRNAs (McCleverty et al., 2007 [PubMed 17900615]).[supplied by OMIM].

PUS10 Blocking Peptide (N-term) - References

Dick, D.M., et al. Am. J. Med. Genet. B Neuropsychiatr. Genet. 153B (6), 1179-1188 (2010) :
McGovern, D.P., et al. Nat. Genet. 42(4):332-337(2010)
Dubois, P.C., et al. Nat. Genet. 42(4):295-302(2010)
Hosgood, H.D. III, et al. Occup Environ Med 66(12):848-853(2009)
Park, S.Y., et al. BMB Rep 42(8):511-515(2009)