

**BCDIN3D Blocking Peptide (C-Term)**  
**Synthetic peptide**  
**Catalog # BP22145b****Specification**

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**BCDIN3D Blocking Peptide (C-Term) - Product Information**

Primary Accession [Q7Z5W3](#)  
Other Accession [Q5RFI3](#)

**BCDIN3D Blocking Peptide (C-Term) - Additional Information**

**Gene ID** 144233

**Other Names**

Pre-miRNA 5'-monophosphate methyltransferase, 2.1.1.-, BCDIN3 domain-containing protein, BCDIN3D

**Target/Specificity**

The synthetic peptide sequence is selected from aa 263-276 of HUMAN BCDIN3D

**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.

**BCDIN3D Blocking Peptide (C-Term) - Protein Information**

**Name** BCDIN3D ([HGNC:27050](#))

**Function**

O-methyltransferase that specifically monomethylates 5'- monophosphate of cytoplasmic histidyl tRNA (tRNA(His)), acting as a capping enzyme by protecting tRNA(His) from cleavage by DICER1 (PubMed:<a href="http://www.uniprot.org/citations/28119416" target="\_blank">28119416</a>, PubMed:<a href="http://www.uniprot.org/citations/31329584" target="\_blank">31329584</a>, PubMed:<a href="http://www.uniprot.org/citations/31919512" target="\_blank">31919512</a>). Also able, with less efficiently, to methylate the 5' monophosphate of a subset of pre- miRNAs, acting as a negative regulator of miRNA processing (PubMed:<a href="http://www.uniprot.org/citations/23063121" target="\_blank">23063121</a>, PubMed:<a href="http://www.uniprot.org/citations/28119416" target="\_blank">28119416</a>). The 5' monophosphate of pre-miRNAs is recognized by DICER1 and is required for pre-miRNAs processing: methylation at this position reduces the processing of pre-miRNAs by DICER1 (PubMed:<a href="http://www.uniprot.org/citations/23063121" target="\_blank">23063121</a>). Was also reported to mediate dimethylation of pre-miR-145; however dimethylation cannot be

reproduced by another group which observes a monomethylation of pre-miR-145 (PubMed:<a href="http://www.uniprot.org/citations/23063121" target="\_blank">23063121</a>, PubMed:<a href="http://www.uniprot.org/citations/28119416" target="\_blank">28119416</a>).

**Cellular Location**

Cytoplasm.

**BCDIN3D Blocking Peptide (C-Term) - Protocols**

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

- [Blocking Peptides](#)

**BCDIN3D Blocking Peptide (C-Term) - Images****BCDIN3D Blocking Peptide (C-Term) - Background**

O-methyltransferase that specifically dimethylates the 5' monophosphate of pre-miRNAs, acting as a negative regulator of miRNA processing. The 5' monophosphate of pre-miRNAs is recognized by DICER1 and is required for pre-miRNAs processing: methylation at this position reduces the processing of pre-miRNAs by DICER1. Able to mediate methylation of pre-miR-145, as well as other pre- miRNAs.

**BCDIN3D Blocking Peptide (C-Term) - References**

Ota T.,et al.Nat. Genet. 36:40-45(2004).

Mural R.J.,et al.Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.

Xhemalce B.,et al.Cell 151:278-288(2012).