

**(Mouse) Zcchc11 Blocking Peptide (C-term)**  
**Synthetic peptide**  
**Catalog # BP20889c**

**Specification**

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**(Mouse) Zcchc11 Blocking Peptide (C-term) - Product Information**

Primary Accession [B2RX14](#)

**(Mouse) Zcchc11 Blocking Peptide (C-term) - Additional Information**

**Gene ID** 230594

**Other Names**

Terminal uridylyltransferase 4, TUTase 4, Zinc finger CCHC domain-containing protein 11, Zcchc11, Kiaa0191, Tut4

**Target/Specificity**

The synthetic peptide sequence is selected from aa 1568-1580 of HUMAN Zcchc11

**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.

**(Mouse) Zcchc11 Blocking Peptide (C-term) - Protein Information**

**Name** Tut4 {ECO:0000312|MGI:MGI:2445126}

**Function**

Uridylyltransferase that mediates the terminal uridylation of mRNAs with short (less than 25 nucleotides) poly(A) tails, hence facilitating global mRNA decay (PubMed:<a href="http://www.uniprot.org/citations/28792939" target="\_blank">28792939</a>). Essential for both oocyte maturation and fertility. Through 3' terminal uridylation of mRNA, sculpts, with TUT7, the maternal transcriptome by eliminating transcripts during oocyte growth (PubMed:<a href="http://www.uniprot.org/citations/28792939" target="\_blank">28792939</a>). Involved in microRNA (miRNA)-induced gene silencing through uridylation of deadenylated miRNA targets. Also functions as an integral regulator of microRNA biogenesis using 3 different uridylation mechanisms (By similarity). Acts as a suppressor of miRNA biogenesis by mediating the terminal uridylation of some miRNA precursors, including that of let-7 (pre-let-7), miR107, miR-143 and miR-200c. Uridylated miRNAs are not processed by Dicer and undergo degradation. Degradation of pre-let-7 contributes to the maintenance of embryonic stem (ES) cell pluripotency (By similarity). Also catalyzes the 3' uridylation of miR-26A, a miRNA that targets IL6 transcript. This abrogates the silencing of IL6 transcript, hence promoting cytokine expression (PubMed:<a

[19703396](http://www.uniprot.org/citations/19703396)). In the absence of LIN28A, TUT7 and TUT4 monouridylate group II pre-miRNAs, which includes most of pre-let7 members, that shapes an optimal 3' end overhang for efficient processing (PubMed:[28671666](http://www.uniprot.org/citations/28671666)). Add oligo-U tails to truncated pre-miRNAs with a 5' overhang which may promote rapid degradation of non-functional pre-miRNA species (By similarity). May also suppress Toll-like receptor-induced NF-kappa-B activation via binding to T2BP (By similarity). Does not play a role in replication-dependent histone mRNA degradation (By similarity). Due to functional redundancy between TUT4 and TUT7, the identification of the specific role of each of these proteins is difficult (PubMed:[28671666](http://www.uniprot.org/citations/28671666), PubMed:[28792939](http://www.uniprot.org/citations/28792939), PubMed:[22898984](http://www.uniprot.org/citations/22898984)). TUT4 and TUT7 restrict retrotransposition of long interspersed element-1 (LINE-1) in cooperation with MOV10 counteracting the RNA chaperone activity of L1RE1. TUT7 uridylates LINE-1 mRNAs in the cytoplasm which inhibits initiation of reverse transcription once in the nucleus, whereas uridylation by TUT4 destabilizes mRNAs in cytoplasmic ribonucleoprotein granules (By similarity).

#### Cellular Location

Nucleus {ECO:0000250|UniProtKB:Q5TAX3}. Cytoplasm. Cytoplasm, Cytoplasmic ribonucleoprotein granule {ECO:0000250|UniProtKB:Q5TAX3}. Note=Mainly cytoplasmic (PubMed:19703396). Translocates into the cytoplasm following treatment of the cell with LPS. Co-enriched in cytoplasmic foci with MOV10 {ECO:0000250|UniProtKB:Q5TAX3, ECO:0000269|PubMed:19703396}

#### Tissue Location

Ubiquitously expressed.

### (Mouse) Zcchc11 Blocking Peptide (C-term) - Protocols

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

- [Blocking Peptides](#)

### (Mouse) Zcchc11 Blocking Peptide (C-term) - Images

### (Mouse) Zcchc11 Blocking Peptide (C-term) - Background

Uridyltransferase that acts as a suppressor of microRNA (miRNA) biogenesis by specifically mediating the terminal uridylation of some miRNAs. Catalyzes the 3' uridylation of precursor let-7 (pre-let-7), a miRNA precursor. Uridylated pre-let-7 miRNAs fail to be processed by Dicer and undergo degradation. Degradation of pre-let-7 contributes to the maintenance of embryonic stem (ES) cells and is required for ES cells to maintain pluripotency. Does not bind RNA by itself, recruited to pre-let-7 miRNAs via its interaction with LIN28A and LIN28B (By similarity). Also catalyzes the 3' uridylation of miR-26A, a miRNA that represses IL6 transcript, leading to abrogate IL6 transcript repression and promote cytokine expression. May also suppress Toll-like receptor-induced NF-kappa-B activity via binding to T2BP. Does not play a role in replication-dependent histone mRNA degradation (By similarity).

### (Mouse) Zcchc11 Blocking Peptide (C-term) - References

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Carninci P., et al. Science 309:1559-1563(2005).  
Trost M., et al. Immunity 30:143-154(2009).  
Jones M.R., et al. Nat. Cell Biol. 11:1157-1163(2009).