10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

# (Mouse) Zcchc11 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP20889c

## Product Information

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| **Application** | WB, E |
| **Primary Accession** | B2RX14 |
| **Reactivity** | Mouse |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Isotype** | Rabbit IgG |
| **Clone Names** | RB51164 |
| **Calculated MW** | 184650 |

## Additional Information

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| **Gene ID** | 230594 |
| **Other Names** | Terminal uridylyltransferase 4, TUTase 4, Zinc finger CCHC domain-containing protein 11, Zcchc11, Kiaa0191, Tut4 |
| **Target/Specificity** | This (Mouse) Zcchc11 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 1568-1600 amino acids from the C-terminal region of (Mouse) Zcchc11. |
| **Dilution** | WB~~1:1000 E~~Use at an assay dependent concentration. |
| **Format** | Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification. |
| **Storage** | Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles. |
| **Precautions** | (Mouse) Zcchc11 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures. |

## Protein Information

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| **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:28792939). 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 |

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| | (PubMed:28792939). 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: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). 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:22898984, PubMed:28671666, PubMed:28792939). TUT4 and TUT7 restrict retrotransposition of long interspersed element-1 (LINE-1) in cooperation with MOV10 counteracting the RNA chaperonne 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. |

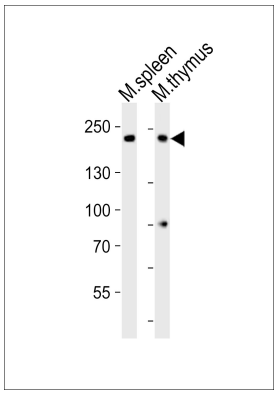
## Background

Uridylyltransferase 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).

## References


Church D.M.,et al.PLoS Biol. 7:E1000112-E1000112(2009).
Okazaki N.,et al.Submitted (FEB-2005) to the EMBL/GenBank/DDBJ databases.
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).

## Images




Western blot analysis of lysates from mouse spleen, mouse thymus tissue lysate (from left to right), using Zcchc11 Antibody (C-term)(Cat. #AP20889c). AP20889c was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody. Lysates at 20ug per lane.