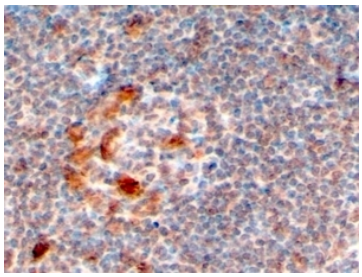
ZCCHC11 Antibody / TUT4 miRNA Processing Enzyme (R35601)

Catalog No.	Formulation	Size
R35601-100UG	0.5 mg/ml in 1X TBS, pH7.3, with 0.5% BSA (US sourced) and 0.02% sodium azide	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Predicted Reactivity	Cow, Dog, Mouse, Rat
Format	Antigen affinity purified
Host	Goat
Clonality	Polyclonal (goat origin)
Isotype	Goat Ig
Purity	Antigen affinity
Gene ID	23318
Applications	Immunohistochemistry (FFPE) : 2-6ug/ml ELISA (peptide) LOD : 1:16000
Limitations	This ZCCHC11 Antibody / TUT4 miRNA Processing Enzyme is available for research use only.



ZCCHC11 Antibody Lymph Node IHC. Immunohistochemistry analysis of FFPE human lymph node tissue stained with ZCCHC11 antibody at 4 ug/ml. Following HIER in pH 6 citrate buffer, scattered HRP-DAB brown cytoplasmic staining is observed in subsets of lymphoid cells, consistent with expression of ZCCHC11 / TUT4, a terminal uridylyl transferase involved in miRNA processing and post-transcriptional RNA regulation.

Description

Zinc finger CCHC domain-containing protein 11 (ZCCHC11) is an RNA-modifying enzyme encoded by the ZCCHC11 gene and functions in post-transcriptional RNA regulation through uridylation of specific RNA substrates. ZCCHC11 Antibody / miRNA Processing Enzyme is useful for studying miRNA maturation, RNA turnover, developmental signaling, and post-transcriptional gene regulation pathways. ZCCHC11 is also widely known as TUT4 or Terminal uridylyl transferase 4 and belongs to the non-canonical poly(A) polymerase family involved in RNA quality-control and regulatory

RNA processing mechanisms.

ZCCHC11 antibody, also referred to as TUT4 antibody, PAPD3 antibody, or Terminal uridylyl transferase 4 antibody in the literature, recognizes a protein that regulates miRNA maturation through selective uridylation of precursor miRNAs and messenger RNAs. One of the best-characterized functions of TUT4 involves interaction with LIN28 proteins to regulate let-7 miRNA biogenesis. In this pathway, TUT4-mediated uridylation promotes degradation or altered processing of let-7 precursor transcripts, thereby influencing differentiation, stemness, and developmental timing.

ZCCHC11 localizes predominantly within the cytoplasm where it participates in RNA-processing complexes regulating transcript stability and miRNA maturation. The enzyme has been implicated in embryonic development, stem cell maintenance, germ cell biology, immune regulation, and cancer progression. Dysregulation of TUT4 activity may alter miRNA expression networks associated with proliferation, differentiation, and stress adaptation. Because post-transcriptional RNA regulation contributes broadly to oncogenic signaling and developmental biology, ZCCHC11 has emerged as an important target in studies of RNA metabolism and miRNA regulatory mechanisms.

TUT4 functions closely with RNA-binding proteins and miRNA regulatory complexes controlling selective transcript degradation and RNA processing. The enzyme has additionally been linked to antiviral responses, inflammatory signaling, and regulation of RNA surveillance pathways. Expression of ZCCHC11/TUT4 has been reported in reproductive tissues, neuronal tissues, and proliferative cell populations with active RNA regulatory programs. Endogenous protein expression is commonly detected in testis and brain-derived tissue lysates.

ZCCHC11 is encoded on human chromosome 1p35 and produces a large multidomain RNA-binding protein containing zinc finger motifs and catalytic nucleotidyl transferase domains characteristic of terminal uridylyl transferases. The protein contributes to dynamic control of RNA maturation and degradation pathways involved in developmental regulation and stress-responsive cellular adaptation.

This goat polyclonal ZCCHC11 antibody has been supported using knockout-validated western blot analysis in mouse testis tissue together with endogenous tissue western blot analysis in rat brain lysates. Knockout studies demonstrate marked reduction of endogenous TUT4 signal in knockout tissues relative to wild-type controls, supporting selective detection of ZCCHC11 / TUT4 in neural and reproductive tissue research applications.

Researchers studying RNA metabolism, miRNA maturation, and post-transcriptional regulatory pathways may also benefit from this ZCCHC11 Antibody / RNA Uridylation Enzyme page featuring knockout-validated tissue western blot data for endogenous TUT4 detection.

Application Notes

Optimal dilution of the ZCCHC11 Antibody / TUT4 miRNA Processing Enzyme should be determined by the researcher.

Immunogen

Amino acids RERCPHPPRGNVSE were used as the immunogen for this ZCCHC11 antibody.

Storage

Aliquot and store the ZCCHC11 antibody at -20oC.

Alternate Names

TUT4 antibody, PAPD3 antibody, Terminal uridylyl transferase 4 antibody, ZCCHC11 RNA processing antibody, LIN28-let-7 pathway antibody