

CASC3 Rabbit pAb

Catalog # AP99789

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	Q15234
Other Accession	Q15234
Reactivity	Mouse
Predicted	Rat, Human, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	76278
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human CASC3/MLN51
Epitope Specificity	501-600/703
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the CASC3 family.
SUBUNIT	Forms homooligomers (By similarity). Interacts with STAU in an RNA-dependent manner (By similarity). Part of the EJC core complex that contains CASC3, EIF4A3, MAGOH and RBM8A. Found in a mRNA splicing-dependent exon junction complex (EJC), at least composed of ACIN1, CASC3, EIF4A3, MAGOH, PNN,
Post-translational modifications	ADP-ribosylated by tankyrase TNKS and TNKS2. Poly-ADP-ribosylated protein is recognized by RNF146, followed by ubiquitination. Ubiquitinated by RNF146 when poly-ADP-ribosylated, leading to its degradation.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	The multiprotein exon junction complex (EJC) is deposited on mRNAs upstream of exon-exon junctions as a consequence of pre-mRNA splicing. In mammalian cells, this complex serves as a key modulator of spliced mRNA metabolism. MLN51 is a nucleocytoplasmic shuttling protein that is overexpressed in breast cancer. The function of MLN51 in mammals remains elusive. Its fly homolog, named barentsz, as well as the proteins mago nashi and tsunagi have been shown to be required for proper oskar mRNA localization to the posterior pole of the oocyte. Magoh and Y14, the human homologs of mago nashi and tsunagi, are core components of the exon junction complex (EJC). The EJC is assembled on spliced mRNAs and plays important roles in post-splicing events including mRNA export, nonsense-mediated mRNA decay, and translation. Human MLN51 is an RNA-binding protein present in ribonucleo-protein complexes.

Additional Information

Gene ID 22794

Other Names	Btz; MLN51; CASC3_BOVIN; CASC3; Cancer susceptibility candidate gene 3 protein; Metastatic lymph node gene 51 protein homolog (MLN 51 homolog); Protein barentsz (Btz); CASC3_HUMAN; Metastatic lymph node gene 51 protein (MLN 51); CASC3_MOUSE; Cancer susceptibility candidate gene 3 protein homolog; Protein barentsz (Btz mBtz); CASC3_RAT; Metastatic lymph node gene 51 protein homolog; CASC3 exon junction complex subunit; cancer susceptibility candidate 3; cancer susceptibility 3
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	CASC3
Synonyms	MLN51 {ECO:0000303 PubMed:12080473}
Function	Required for pre-mRNA splicing as component of the spliceosome (PubMed: 28502770 , PubMed: 29301961). Core component of the splicing-dependent multiprotein exon junction complex (EJC) deposited at splice junctions on mRNAs. The EJC is a dynamic structure consisting of core proteins and several peripheral nuclear and cytoplasmic associated factors that join the complex only transiently either during EJC assembly or during subsequent mRNA metabolism. The EJC marks the position of the exon-exon junction in the mature mRNA for the gene expression machinery and the core components remain bound to spliced mRNAs throughout all stages of mRNA metabolism thereby influencing downstream processes including nuclear mRNA export, subcellular mRNA localization, translation efficiency and nonsense-mediated mRNA decay (NMD). Stimulates the ATPase and RNA-helicase activities of EIF4A3. Plays a role in the stress response by participating in cytoplasmic stress granules assembly and by favoring cell recovery following stress. Component of the dendritic ribonucleoprotein particles (RNPs) in hippocampal neurons. May play a role in mRNA transport. Binds spliced mRNA in sequence-independent manner, 20-24 nucleotides upstream of mRNA exon-exon junctions. Binds poly(G) and poly(U) RNA homomer.
Cellular Location	Cytoplasm. Cytoplasm, perinuclear region {ECO:0000250 UniProtKB:Q8K3W3}. Nucleus. Nucleus speckle. Cytoplasm, Stress granule. Cytoplasm, Cytoplasmic ribonucleoprotein granule {ECO:0000250 UniProtKB:Q8K3X0}. Cell projection, dendrite {ECO:0000250 UniProtKB:Q8K3X0}. Note=Shuttles between the nucleus and the cytoplasm in a XPO1/CRM1-dependent manner. Transported to the cytoplasm as part of the exon junction complex (EJC) bound to mRNA (PubMed:15166247). In nuclear speckles, colocalizes with MAGOH. Under stress conditions, colocalizes with FMR1 and TIA1, but not MAGOH and RBM8A EJC core factors, in cytoplasmic stress granules (PubMed:17652158). In the dendrites of hippocampal neurons, localizes to dendritic ribonucleoprotein granules (By similarity) {ECO:0000250 UniProtKB:Q8K3X0, ECO:0000269 PubMed:15166247, ECO:0000269 PubMed:17652158}
Tissue Location	Widely expressed. Overexpressed in breast cancers and metastasis, as well as in gastric cancers

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