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HTATSF1 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6654a

Product Information

Application	WB, IHC-P, E
Primary Accession	O43719
Other Accession	Q8BGC0
Reactivity	Human
Predicted	Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB18094
Calculated MW	85853
Antigen Region	1-30

Additional Information

Gene ID	27336
Other Names	HIV Tat-specific factor 1, Tat-SF1, HTATSF1
Target/Specificity	This HTATSF1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1-30 amino acids from the N-terminal region of human HTATSF1.
Dilution	WB~~1:1000 IHC-P~~1:100~500 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	HTATSF1 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	HTATSF1 {ECO:0000303|PubMed:35597237, ECO:0000312|HGNC:HGNC:5276}
Function	Component of the 17S U2 SnRNP complex of the spliceosome, a large ribonucleoprotein complex that removes introns from transcribed pre-mRNAs

(PubMed:30567737, PubMed:32494006, PubMed:34822310). The 17S U2 SnRNP complex (1) directly participates in early spliceosome assembly and (2) mediates recognition of the intron branch site during pre-mRNA splicing by promoting the selection of the pre-mRNA branch- site adenosine, the nucleophile for the first step of splicing (PubMed:30567737, PubMed:32494006, PubMed:34822310). Within the 17S U2 SnRNP complex, HTATSF1 is required to stabilize the branchpoint- interacting stem loop (PubMed:34822310). HTATSF1 is displaced from the 17S U2 SnRNP complex before the stable addition of the 17S U2 SnRNP complex to the spliceosome, destabilizing the branchpoint-interacting stem loop and allowing to probe intron branch site sequences (PubMed:32494006, PubMed:34822310). Also acts as a regulator of transcriptional elongation, possibly by mediating the reciprocal stimulatory effect of splicing on transcriptional elongation (PubMed:10454543, PubMed:10913173, PubMed:11780068). Involved in double-strand break (DSB) repair via homologous recombination in S- phase by promoting the recruitment of TOPBP1 to DNA damage sites (PubMed:35597237). Mechanistically, HTATSF1 is (1) recruited to DNA damage sites in S-phase via interaction with poly-ADP-ribosylated RPA1 and (2) phosphorylated by CK2, promoting recruitment of TOPBP1, thereby facilitating RAD51 nucleofilaments formation and RPA displacement, followed by homologous recombination (PubMed:35597237).

Cellular Location Nucleus. Chromosome Note=Recruited to DNA damage sites during S-phase following interaction with poly-ADP-ribosylated RPA1.

Tissue Location Widely expressed..

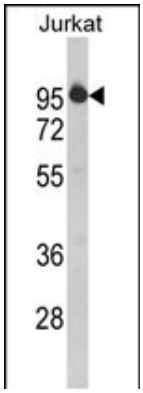
Background

HTATSF1 functions as a cofactor for the stimulation of transcriptional elongation by HIV-1 Tat, which binds to the HIV-1 promoter through Tat-TAR interaction. This protein may also serve as a dual-function factor to couple transcription and splicing and to facilitate their reciprocal activation.

References

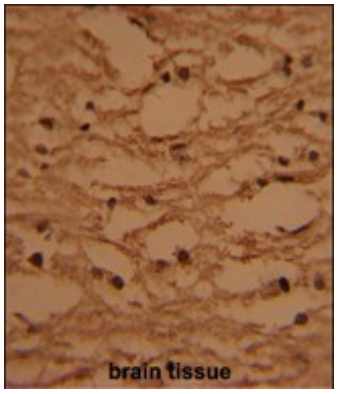
Miller,H.B., PLoS ONE 4 (5), E5710 (2009)
Remoli,A.L., Biochem. J. 396 (2), 371-380 (2006)

Images



Western blot analysis of HTATSF1 Antibody (N-term) (Cat. #AP6654a) in Jurkat cell line lysates (35ug/lane). HTATSF1 (arrow) was detected using the purified Pab.

Formalin-fixed and paraffin-embedded human brain tissue with HTATSF1 Antibody (N-term), which was peroxidase-conjugated to the secondary antibody,



followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.