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

Aprataxin Rabbit mAb

Catalog # AP75095

Product Information

Application	WB, IHC-P, IHC-F
Primary Accession	Q7Z2E3
Reactivity	Human
Host	Rabbit
Clonality	Monoclonal Antibody
Isotype	IgG
Conjugate	Unconjugated
Purification	Affinity Purified
Calculated MW	40740

Additional Information

Gene ID	54840
Other Names	APTX
Dilution	WB~~1:500-1:1000 IHC-P~~N/A IHC-F~~N/A
Format	Liquid in 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and 0.05% BSA.
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

Protein Information

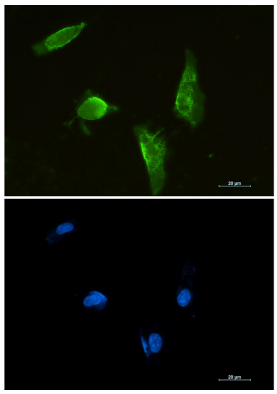
Name	APTX
Synonyms	AXA1
Function	DNA-binding protein involved in single-strand DNA break repair, double-strand DNA break repair and base excision repair (PubMed:15044383, PubMed:15380105, PubMed:16964241, PubMed:17276982, PubMed:24362567). Resolves abortive DNA ligation intermediates formed either at base excision sites, or when DNA ligases attempt to repair non-ligatable breaks induced by reactive oxygen species (PubMed:16964241, PubMed:24362567). Catalyzes the release of adenylate groups covalently linked to 5'-phosphate termini, resulting in the production of 5'-phosphate termini that can be efficiently rejoined (PubMed:16964241, PubMed:17276982, PubMed:24362567). Also able to hydrolyze adenosine 5'-monophosphoramidate (AMP-NH(2)) and diadenosine tetraphosphate (AppppA), but with lower catalytic activity (PubMed:16547001). Likewise, catalyzes the release of 3'-linked guanosine (DNAppG) and inosine (DNAppI)

	from DNA, but has higher specific activity with 5'-linked adenosine (AppDNA) (By similarity).
Cellular Location	Nucleus, nucleoplasm. Nucleus, nucleolus Note=Upon genotoxic stress, colocalizes with XRCC1 at sites of DNA damage (PubMed:15380105). Colocalizes with MDC1 at sites of DNA double- strand breaks (PubMed:20008512). Interaction with NCL is required for nucleolar localization (PubMed:16777843).
Tissue Location	Widely expressed; detected in liver, kidney and lymph node (at protein level) (PubMed:14755728). Isoform 1 is highly expressed in the cerebral cortex and cerebellum, compared to isoform 2 (at protein level) (PubMed:14755728). Widely expressed; detected throughout the brain, in liver, kidney, skeletal muscle, fibroblasts, lymphocytes and pancreas (PubMed:11586299, PubMed:11586300, PubMed:15276230).

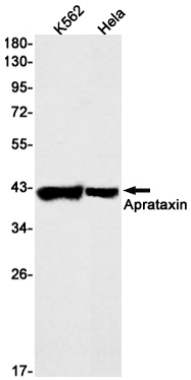
Background

This gene encodes a member of the histidine triad (HIT) superfamily. The encoded protein may play a role in single-stranded DNA repair through its nucleotide-binding activity and its diadenosine polyphosphate hydrolase activity. Mutations in this gene have been associated with ataxia-ocular apraxia. Alternatively spliced transcript variants have been identified for this gene.

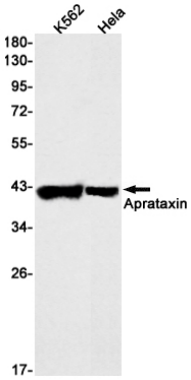
Images



Immunocytochemistry analysis of Aprataxin (green) in U87-MG using Aprataxin antibody,and DAPI(blue).



Western blot analysis of Aprataxin in K562, Hela lysates using Aprataxin antibody.



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