

**APTX Antibody (Center) Blocking Peptide**  
**Synthetic peptide**  
**Catalog # BP8863c****Specification**

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**APTX Antibody (Center) Blocking Peptide - Product Information**Primary Accession [Q7Z2E3](#)**APTX Antibody (Center) Blocking Peptide - Additional Information****Gene ID** 54840**Other Names**

Aprataxin, 3---, Forkhead-associated domain histidine triad-like protein, FHA-HIT, APTX, AXA1

**Target/Specificity**

The synthetic peptide sequence used to generate the antibody [AP8863c](/products/AP8863c) was selected from the Center region of human APTX. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

**Format**

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

**Precautions**

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

**APTX Antibody (Center) Blocking Peptide - 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: [15380105](http://www.uniprot.org/citations/15380105), PubMed: [15044383](http://www.uniprot.org/citations/15044383), PubMed: [16964241](http://www.uniprot.org/citations/16964241), PubMed: [17276982](http://www.uniprot.org/citations/17276982), PubMed: [24362567](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/16964241), PubMed: [24362567](http://www.uniprot.org/citations/24362567)).

target="\_blank">24362567</a>). 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:<a href="http://www.uniprot.org/citations/16964241" target="\_blank">16964241</a>, PubMed:<a href="http://www.uniprot.org/citations/17276982" target="\_blank">17276982</a>, PubMed:<a href="http://www.uniprot.org/citations/24362567" target="\_blank">24362567</a>). Also able to hydrolyze adenosine 5'-monophosphoramidate (AMP-NH(2)) and diadenosine tetraphosphate (AppppA), but with lower catalytic activity (PubMed:<a href="http://www.uniprot.org/citations/16547001" target="\_blank">16547001</a>). 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:15276230, PubMed:11586299, PubMed:11586300).

### **APT-X Antibody (Center) Blocking Peptide - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

### **APT-X Antibody (Center) Blocking Peptide - Images**

### **APT-X Antibody (Center) Blocking Peptide - Background**

APT-X is encoding a member of the histidine triad (HIT) superfamily, some of which have nucleotide-binding and diadenosine polyphosphate hydrolase activities. The encoded protein may play a role in single-stranded DNA repair.

### **APT-X Antibody (Center) Blocking Peptide - References**

Luedeke, M., et al., Cancer Epidemiol. Biomarkers Prev. 18 (11), 3030-3035 (2009)