

# Aprataxin Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP54283

## Product Information

|                   |                          |
|-------------------|--------------------------|
| Application       | IHC-P, IHC-F, IF, ICC, E |
| Primary Accession | <a href="#">Q7Z2E3</a>   |
| Reactivity        | Rat                      |
| Host              | Rabbit                   |
| Clonality         | Polyclonal               |
| Calculated MW     | 40740                    |

## Additional Information

|             |                                                                                                                                                                                                 |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Gene ID     | 54840                                                                                                                                                                                           |
| Other Names | Aprataxin, 3.6.1.71, 3.6.1.72, Forkhead-associated domain histidine triad-like protein, FHA-HIT, APTX, AXA1                                                                                     |
| Dilution    | IHC-P=1:100-500,IHC-F=1:100-500,ICC=1:100-500,IF=1:100-500,ELISA=1:5000-10000                                                                                                                   |
| 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

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| 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: <a href="#">15044383</a> , PubMed: <a href="#">15380105</a> , PubMed: <a href="#">16964241</a> , PubMed: <a href="#">17276982</a> , PubMed: <a href="#">24362567</a> ). 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: <a href="#">16964241</a> , PubMed: <a href="#">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="#">16964241</a> , PubMed: <a href="#">17276982</a> , PubMed: <a href="#">24362567</a> ). Also able to hydrolyze adenosine 5'-monophosphoramidate (AMP-NH(2)) and diadenosine tetraphosphate (AppppA), but with lower catalytic activity (PubMed: <a href="#">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). |

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|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Cellular Location</b> | 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).                                                                                                              |
| <b>Tissue Location</b>   | 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). |

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