**BACKGROUND**

Aprataxin is a nuclear protein, present in both the nucleoplasm and the nucleolus, which is a member of the histidine triad (HIT) superfamily. Aprataxin is involved in DNA single-strand break repair, mediating protein-protein interactions with molecules responding to DNA damage. Aprataxin contains three conserved domains: an N-terminal forkhead-associated (FHA) domain which mediates protein-protein interactions, a HIT domain that is similar to Hint, and a C-terminal zinc finger domain. Loss of function mutations in APTX, the gene encoding for Aprataxin, destabilize the Aprataxin protein and result in a rare neurological disorder known as ataxia-oculomotor apraxia, characterized by abnormal movements of the head and eyes. These mutations either target the HIT domain or truncate the protein N-terminal to a zinc finger.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: APTX (human) mapping to 9p21.1; Apxt (mouse) mapping to 4 A5.

**SOURCE**

Aprataxin (B-12) is a mouse monoclonal antibody raised against amino acids 57-356 mapping at the C-terminus of Aprataxin of human origin.

**PRODUCT**

Each vial contains 200 µg IgG2a kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-374108 X, 200 µg/0.1 ml.

**STORAGE**

Store at 4°C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

**PROTOCOLS**

See our website at www.scbt.com for detailed protocols and support products.

**APPLICATIONS**

Aprataxin (B-12) is recommended for detection of Aprataxin isoforms 1-10 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Aprataxin siRNA (h): sc-60196, Aprataxin siRNA (m): sc-60197, Aprataxin shRNA Plasmid (h): sc-60196-SH, Aprataxin shRNA Plasmid (m): sc-60197-SH, Aprataxin shRNA (h) Lentiviral Particles: sc-60197-V and Aprataxin shRNA (m) Lentiviral Particles: sc-60197-V.

**RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-RTC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

**DATA**

![Western Blot Analysis](image1)

Aprataxin (B-12): sc-374108. Western blot analysis of Aprataxin expression in non-transfected 293T (A), mouse Aprataxin transfected 293T (sc-117752), mouse Aprataxin transfected 293T (sc-124980), 293T Lysate (B), NC-I-H1299 whole cell lysate (C) and Hep G2 (D) whole cell lysates and HeLa (E) and CCRF-CEM (F) nuclear extracts.

![Immunofluorescence Staining](image2)

Aprataxin (B-12): sc-374108. Immunofluorescence staining of formalin-fixed Hep G2 cells showing nuclear localization (A) Immunoperoxidase staining of formalin fixed, paraffin-embedded human salivary gland tissue showing nuclear staining of glandular cells (B).

**RESEARCH USE**

For research use only, not for use in diagnostic procedures.