SANTA CRUZ BIOTECHNOLOGY, INC.

APPBP1 (D-25): sc-130690

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The Power to Question

BACKGROUND

APPBP1 (β-Amyloid precursor protein-binding protein 1), also known as NAE1 (NEDD8-activating enzyme E1 regulatory subunit 1), HPP1 or ula-1, is a member of the ubiquitin-activating E1 family. In fetal tissues APPBP1 is widely expressed and in adult tissues it is expressed throughout the brain. APPBP1 is a cell membrane associated protein and functions as the regulatory subunit in a heterodimer with UBA3. The APPBP1/UBA3 complex binds to and activates NEDD8, a ubiquitin-like protein involved in signal transduction, cell proliferation and development. This suggests that APPBP1 affects a variety of cellular functions. In addition, APPBP1 is essential for cell cycle progression through the S/M checkpoint. More specifically, it inhibits the entry into S phase and promotes entry into M phase.

REFERENCES

1. Walden, H., Podgorski, M.S., Huang, D.T., Miller, D.W., Howard, R.J., Minor, D.L., Holton, J.M. and Schulman, B.A. 2003. The structure of the APPBP1-UBA3-NEDD8-ATP complex reveals the basis for selective ubiquitin-like protein activation by an E1. Mol. Cell 12: 1427-1437.
2. Bohnsack, R.N. and Haas, A.L. 2003. Conservation in the mechanism of NEDD8 activation by the human APPBP1-UBA3 heterodimer. J. Biol. Chem. 278: 26823-26830.

CHROMOSOMAL LOCATION

Genetic locus: NAE1 (human) mapping to 16q22.1.

SOURCE

APPBP1 (D-25) is a purified rabbit polyclonal antibody raised against a peptide mapping near the C-terminus of APPBP1 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

APPBP1 (D-25) is recommended for detection of APPBP1 of human origin by Western Blotting (starting dilution 1:200, 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 APPBP1 siRNA (h): sc-77421, APPBP1 shRNA Plasmid (h): sc-77421-SH and APPBP1 shRNA (h) Lentiviral Particles: sc-77421-V.

Molecular Weight of membrane associated APPBP1: 65 kDa.

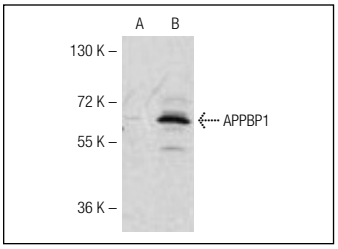
Molecular Weight of cytosolic APPBP1: 59 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

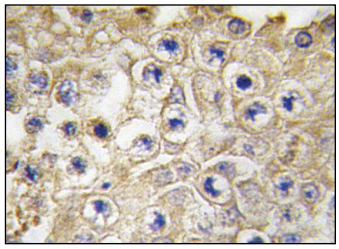
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



APPBP1 (D-25): sc-130690. Western blot analysis of APPBP1 expression in non-transfected (**A**) and human APPBP1 transfected (**B**) 293 whole cell lysates.



APPBP1 (D-25): sc-130690. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human testis tissue showing cytoplasmic and membrane localization.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.