

APPBP1 (K-20): sc-79843

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

- 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.
- 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.
- Huang, D.T., Miller, D.W., Mathew, R., Cassell, R., Holton, J.M., Roussel, M.F. and Schulman, B.A. 2004. A unique E1-E2 interaction required for optimal conjugation of the ubiquitin-like protein NEDD8. *Nat. Struct. Mol. Biol.* 11: 927-935.
- Narasimhan, J., Wang, M., Fu, Z., Klein, J.M., Haas, A.L. and Kim, J.J. 2005. Crystal structure of the interferon-induced ubiquitin-like protein ISG15. *J. Biol. Chem.* 280: 27356-27365.
- Duda, D.M., Walden, H., Sfondouris, J. and Schulman, B.A. 2005. Structural analysis of *Escherichia coli* ThiF. *J. Mol. Biol.* 349: 774-786.
- Huang, D.T., Paydar, A., Zhuang, M., Waddell, M.B., Holton, J.M. and Schulman, B.A. 2005. Structural basis for recruitment of Ubc12 by an E2 binding domain in NEDD8's E1. *Mol. Cell* 17: 341-350.

CHROMOSOMAL LOCATION

Genetic locus: NAE1 (human) mapping to 16q22.1; Nae1 (mouse) mapping to 8 D3.

SOURCE

APPBP1 (K-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of APPBP1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-79843 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

APPBP1 (K-20) is recommended for detection of APPBP1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (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 siRNA (m): sc-106975, APPBP1 shRNA Plasmid (h): sc-77421-SH, APPBP1 shRNA Plasmid (m): sc-106975-SH, APPBP1 shRNA (h) Lentiviral Particles: sc-77421-V and APPBP1 shRNA (m) Lentiviral Particles: sc-106975-V.

Molecular Weight of membrane associated form APPBP1: 65 kDa.

Molecular Weight of cytosolic form APPBP1: 59 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.


 MONOS
Satisfaction
Guaranteed

Try **APPBP1 (C-2): sc-390002** or **APPBP1 (20): sc-135839**, our highly recommended monoclonal alternatives to APPBP1 (K-20).