

XAB1 (D-15): sc-169818

BACKGROUND

XAB1 (XPA binding protein 1), also known as MBDIN, NTPBP, ATPBD1A or HUSSY-23, is a 374 amino acid cytoplasmic protein that is involved in protein synthesis events. Expressed ubiquitously with highest expression in testis, XAB1 binds to the RNA polymerase II- (Pol II) associated proteins RPAP1-3 and to XPA (a protein involved in DNA repair mechanisms), thereby forming an interface with Pol II. Via this interaction, XAB1 is thought to mediate the involvement of Pol II in both protein complex formation and protein chaperone/scaffolding activities. In addition, XAB1 interacts with components of the integrator and molecular chaperone complexes, further implicating XAB1 in protein assembly. XAB1 contains a cluster of acidic amino acids in its C-terminal region and a series of sequences similar to those found in GTP-binding proteins in its N-terminal region, suggesting that XAB1 has possible GTPase activity.

REFERENCES

1. Nitta, M., et al. 2000. A novel cytoplasmic GTPase XAB1 interacts with DNA repair protein XPA. *Nucleic Acids Res.* 28: 4212-4218.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 611479. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
3. Lembo, F., et al. 2003. MBDin, a novel MBD2-interacting protein, relieves MBD2 repression potential and reactivates transcription from methylated promoters. *Mol. Cell. Biol.* 23: 1656-1665.
4. Angrisano, T., et al. 2006. TACC3 mediates the association of MBD2 with histone acetyltransferases and relieves transcriptional repression of methylated promoters. *Nucleic Acids Res.* 34: 364-372.
5. Jeronimo, C., et al. 2007. Systematic analysis of the protein interaction network for the human transcription machinery reveals the identity of the 7SK capping enzyme. *Mol. Cell* 27: 262-274.
6. Gras, S., et al. 2007. Structural insights into a new homodimeric self-activated GTPase family. *EMBO Rep.* 8: 569-575.

CHROMOSOMAL LOCATION

Genetic locus: GPN1 (human) mapping to 2p23.3; Gpn1 (mouse) mapping to 5 B1.

SOURCE

XAB1 (D-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of XAB1 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-169818 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

XAB1 (D-15) is recommended for detection of XAB1 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).

XAB1 (D-15) is also recommended for detection of XAB1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for XAB1 siRNA (h): sc-94614, XAB1 siRNA (m): sc-155370, XAB1 shRNA Plasmid (h): sc-94614-SH, XAB1 shRNA Plasmid (m): sc-155370-SH, XAB1 shRNA (h) Lentiviral Particles: sc-94614-V and XAB1 shRNA (m) Lentiviral Particles: sc-155370-V.

Molecular Weight of XAB1: 42 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209 or XAB1 (h): 293T Lysate: sc-171461.

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.

PROTOCOLS

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