SANTA CRUZ BIOTECHNOLOGY, INC.

XAB1 (38.1-H): sc-101142

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 (PolI II)-associated proteins RPAP1-3 and to XPA (a protein involved in DNA repair mechanisms), thereby forming an interface with PolI 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., Saijo, M., Kodo, N., Matsuda, T., Nakatsu, Y., Tamai, H. and Tanaka, K. 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., Pero, R., Angrisano, T., Vitiello, C., Iuliano, R., Bruni, C.B. and Chiariotti, L. 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., Lembo, F., Pero, R., Natale, F., Fusco, A., Avvedimento, V.E., Bruni, C.B. and Chiariotti, L. 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., Forget, D., Bouchard, A., Li, Q., Chua, G., Poitras, C., Thérien, C., Bergeron, D., Bourassa, S., Greenblatt, J., Chabot, B., Poirier, G.G., Hughes, T.R., Blanchette, M., Price, D.H. and Coulombe, B. 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., Chaumont, V., Fernandez, B., Carpentier, P., Charrier-Savournin, F., Schmitt, S., Pineau, C., Flament, D., Hecker, A., Forterre, P., Armengaud, J. and Housset, D. 2007. Structural insights into a new homodimeric self-activated GTPase family. EMBO Rep. 8: 569-575.

CHROMOSOMAL LOCATION

Genetic locus: GPN1 (human) mapping to 2p23.2.

SOURCE

XAB1 (38.1-H) is a mouse monoclonal antibody raised against recombinant XAB1 of human origin.

RESEARCH USE

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

PRODUCT

Each vial contains 100 µg IgG_1 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

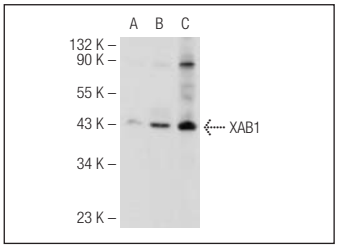
XAB1 (38.1-H) is recommended for detection of XAB1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (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 XAB1 siRNA (h): sc-94614, XAB1 shRNA Plasmid (h): sc-94614-SH and XAB1 shRNA (h) Lentiviral Particles: sc-94614-V.

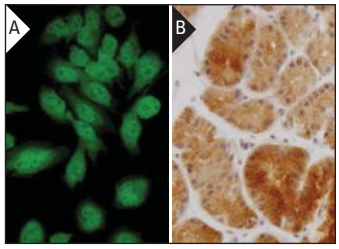
Molecular Weight of XAB1: 42 kDa.

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

DATA



XAB1 (38.1-H): sc-101142. Western blot analysis of XAB1 expression in non-transfected 293T: sc-117752 (**A**), human XAB1 transfected 293T: sc-171461 (**B**) and HL-60 (**C**) whole cell lysates.



XAB1 (38.1-H): sc-101142. Immunofluorescence staining of paraformaldehyde-fixed HeLa cells showing nuclear and cytoplasmic localization (**A**) and immunoperoxidase staining of formalin-fixed, paraffin-embedded human stomach tissue showing cytoplasmic localization (**B**).

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.