XRCC6BP1 (A-14): sc-169824

BACKGROUND

XRCC6BP1, also known as mitochondrial inner membrane protease ATP23 homolog or KUB3, is a 246 amino acid protein. As a member of the peptidase M76 family, XRCC6BP1 interacts with XRCC6. The gene encoding XRCC6BP1 maps to human chromosome 12 and encodes Ku70 binding protein. Ku70 is a part of the DNA-dependent protein kinase complex and is involved in double-strand break repair. It is suggested that XRCC6BP1 gene amplification affects double-strand break repair in glioblastoma cell lines. Chromosome 12 is associated with a variety of diseases and afflictions, including hypochondrogenesis, achondrogenesis, Kniest dysplasia, Noonan syndrome and trisomy 12p, which causes facial developmental defects and seizure disorders.

REFERENCES

1. Szala, S., et al. 1990. Molecular cloning of cDNA for the human tumor-associated antigen CO-029 and identification of related transmembrane antigens. Proc. Natl. Acad. Sci. USA 87: 6833-6837.

2. Gwynn, B., et al. 1996. Genetic localization of Cd63, a member of the transmembrane 4 superfamily, reveals two distinct loci in the mouse genome. Genomics 35: 389-391.

3. Yang, C.R., et al. 1999. Isolation of Ku70-binding proteins (KUBs). Nucleic Acids Res. 27: 2165-2174.

4. Gerhard, D.S., et al. 2004. The status, quality, and expansion of the NIH full-length cDNA project: the Mammalian Gene Collection (MGC). Genome Res. 14: 2121-2127.

5. Scherer, S.E., et al. 2006. The finished DNA sequence of human chromosome 12. Nature 440: 346-351.

6. Fischer, U., et al. 2008. A different view on DNA amplifications indicates frequent, highly complex, and stable amplicons on 12q13-21 in glioma. Mol. Cancer Res. 6: 576-584.

CHROMOSOMAL LOCATION

Genetic locus: XRCC6BP1 (human) mapping to 12q14.1; Xrcc6bp1 (mouse) mapping to 10 D3.

SOURCE

XRCC6BP1 (A-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of XRCC6BP1 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-169824 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-169824 X, 200 µg/0.1 ml.

RESEARCH USE

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

APPLICATIONS

XRCC6BP1 (A-14) is recommended for detection of XRCC6BP1 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).

XRCC6BP1 (A-14) is also recommended for detection of XRCC6BP1 in additional species, including canine, bovine, porcine and avian.

Suitable for use as control antibody for XRCC6BP1 siRNA (h): sc-95934, XRCC6BP1 siRNA (m): sc-155393, XRCC6BP1 shRNA Plasmid (h): sc-95934-SH, XRCC6BP1 shRNA Plasmid (m): sc-155393-SH, XRCC6BP1 shRNA (h) Lentiviral Particles: sc-95934-V and XRCC6BP1 shRNA (m) Lentiviral Particles: sc-155393-V.

XRCC6BP1 (A-14) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of XRCC6BP1: 28 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.

PROTOCOLS

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