SANTA CRUZ BIOTECHNOLOGY, INC.

FBXO2 (A-12): sc-393873

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

F-box proteins are critical components of the SCF (skp1-CUL-1-F-box protein) type E3 ubiquitin ligase complex and are involved in substrate recognition and recruitment for ubiquitination. They are members of a larger family of proteins that are involved in the regulation of a wide variety of cellular processes (including the cell cycle, immune responses, signaling cascades and developmental events) through the targeting of proteins, such as cyclins, cyclin-dependent kinase inhibitors, IκB-α and β-catenin, for proteasomal degradation. FBXO2 (F-box protein 2), also known as FBX2, FBG1 or NFB42, is a 296 amino acid protein that contains one F-box domain and one F-box associated domain. Functioning as a component of the SCF complex, FBXO2 is thought to recognize and bind to select phosphorylated proteins, thereby promoting their ubiquitination and subsequent degradation.

CHROMOSOMAL LOCATION

Genetic locus: FBXO2 (human) mapping to 1p36.22; Fbxo2 (mouse) mapping to 4 E2.

SOURCE

FBXO2 (A-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 140-171 within an internal region of FBXO2 of human origin.

PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-393873 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

FBXO2 (A-12) is recommended for detection of FBXO2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for FBXO2 siRNA (h): sc-75008, FBXO2 siRNA (m): sc-75009, FBXO2 siRNA (r): sc-270216, FBXO2 shRNA Plasmid (h): sc-75008-SH, FBXO2 shRNA Plasmid (m): sc-75009-SH, FBXO2 shRNA Plasmid (r): sc-270216-SH, FBXO2 shRNA (h) Lentiviral Particles: sc-75008-V, FBXO2 shRNA (m) Lentiviral Particles: sc-75009-V and FBXO2 shRNA (r) Lentiviral Particles: sc-270216-V.

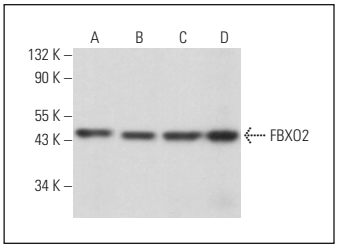
Molecular Weight of FBXO2: 42 kDa.

Positive Controls: FBXO2 (m): 293T Lysate: sc-125331, Neuro-2A whole cell lysate: sc-364185 or Hep G2 cell lysate: sc-2227.

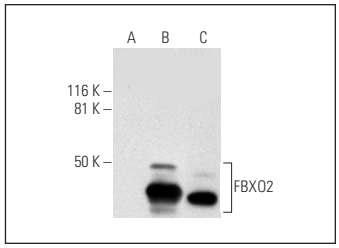
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



FBXO2 (A-12): sc-393873. Western blot analysis of FBXO2 expression in Hep G2 (**A**), NCI-H1299 (**B**) and Neuro-2A (**C**) whole cell lysates and rat brain tissue extract (**D**).



FBXO2 (A-12): sc-393873. Western blot analysis of FBXO2 expression in non-transfected 293T: sc-117752 (**A**), mouse FBXO2 transfected 293T: sc-125331 (**B**) and Hep G2 (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Che, X., et al. 2020. FBXO2 promotes proliferation of endometrial cancer by ubiquitin-mediated degradation of FBN1 in the regulation of the cell cycle and the autophagy pathway. Front. Cell Dev. Biol. 8: 843.
2. Liu, E.A., et al. 2020. FBXO2 mediates clearance of damaged lysosomes and modifies neurodegeneration in the Niemann-Pick C brain. JCI Insight 5: e136676.
3. Heo, C.K., et al. 2020. Cyclic peptide mimotopes for the detection of serum anti-ATIC autoantibody biomarker in hepato-cellular carcinoma. Int. J. Mol. Sci. 21: 9718.
4. Ji, J., et al. 2022. FBXO2 targets glycosylated SUN2 for ubiquitination and degradation to promote ovarian cancer development. Cell Death Dis. 13: 442.
5. Heo, C.K., et al. 2022. Serum BRD2 autoantibody in hepatocellular carcinoma and its detection using mimotope peptide-conjugated BSA. Int. J. Oncol. 61: 158.

RESEARCH USE

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

PROTOCOLS

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