SANTA CRUZ BIOTECHNOLOGY, INC.

FBXO4 (H-300): sc-134721

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. F-box proteins are members of a large family that regulates cell cycle, immune response, signalling cascades and developmental programs by targeting proteins, such as cyclins, cyclin-dependent kinase inhibitors, IκB-α and β-catenin, for degradation by the proteasome after ubiquitination. F-box only protein 4 (FBXO4) is a substrate recognition component of the SCF-type E3 ubiquitin ligase complex, possibly involved in the recognition and binding to phosphorylated target proteins. FBXO4 directly interacts with Skp1 p19 and CUL-1 within the SCF-type E3 complex and has been found to recognize TRF1 and promote its ubiquitination. FBXO4 is expressed as two isoforms produced by alternative splicing.

REFERENCES

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2. Winston, J.T., et al. 1999. A family of mammalian F-box proteins. Curr. Biol. 9: 1180-1182.
3. Chiaur, D.S., et al. 2000. Five human genes encoding F-box proteins: chromosome mapping and analysis in human tumors. Cytogenet. Cell Genet. 88: 255-258.
4. Jin, J., et al. 2004. Systematic analysis and nomenclature of mammalian F-box proteins. Genes Dev. 18: 2573-2580.
5. Lee, T.H., et al. 2006. The F-box protein FBX4 targets PIN2/TRF1 for ubiquitin-mediated degradation and regulates telomere maintenance. J. Biol. Chem. 281: 759-768.
6. Lin, D.I., et al. 2006. Phosphorylation-dependent ubiquitination of cyclin D1 by the SCF(FBX4-αB crystallin) complex. Mol. Cell 24: 355-366.
7. Liu, Y., et al. 2006. The ETS protein MEF is regulated by phosphorylation-dependent proteolysis via the protein-ubiquitin ligase SCFSkp2. Mol. Cell. Biol. 26: 3114-3123.
8. Barbash, O., et al. 2008. Mutations in Fbx4 inhibit dimerization of the SCF(Fbx4) ligase and contribute to cyclin D1 overexpression in human cancer. Cancer Cell 14: 68-78.

CHROMOSOMAL LOCATION

Genetic locus: FBXO4 (human) mapping to 5p13.1; Fbxo4 (mouse) mapping to 15 A1.

SOURCE

FBXO4 (H-300) is a rabbit polyclonal antibody raised against amino acids 59-358 mapping within an internal region of FBXO4 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.

APPLICATIONS

FBXO4 (H-300) is recommended for detection of FBXO4 of mouse, rat and 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

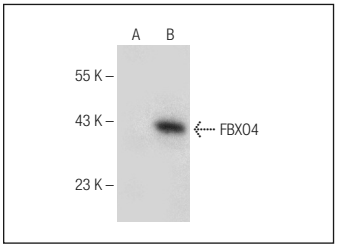
FBXO4 (H-300) is also recommended for detection of FBXO4 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for FBXO4 siRNA (h): sc-91910, FBXO4 siRNA (m): sc-145124, FBXO4 shRNA Plasmid (h): sc-91910-SH, FBXO4 shRNA Plasmid (m): sc-145124-SH, FBXO4 shRNA (h) Lentiviral Particles: sc-91910-V and FBXO4 shRNA (m) Lentiviral Particles: sc-145124-V.

Molecular Weight of FBXO4: 44 kDa.

Positive Controls: FBXO4 (m): 293T Lysate: sc-120218.

DATA



FBXO4 (H-300): sc-134721. Western blot analysis of FBXO4 expression in non-transfected: sc-117752 (**A**) and mouse FBXO4 transfected: sc-120218 (**B**) 293T whole cell lysates.

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.