

FBXO4 (K-12): sc-162829

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, I κ B- 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

- Cenciarelli, C., et al. 1999. Identification of a family of human F-box proteins. *Curr. Biol.* 9: 1177-1179.
- Winston, J.T., et al. 1999. A family of mammalian F-box proteins. *Curr. Biol.* 9: 1180-1182.
- 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.
- Jin, J., et al. 2004. Systematic analysis and nomenclature of mammalian F-box proteins. *Genes Dev.* 18: 2573-2580.
- 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.
- Lin, D.I., et al. 2006. Phosphorylation-dependent ubiquitination of cyclin D1 by the SCF(FBX4- α B crystallin) complex. *Mol. Cell* 24: 355-366.
- 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.
- 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 (K-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of FBXO4 of human origin.

STORAGE

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

PRODUCT

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

Blocking peptide available for competition studies, sc-162829 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

FBXO4 (K-12) 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), 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); non cross-reactive with other FBXO family members.

FBXO4 (K-12) is also recommended for detection of FBXO4 in additional species, including equine, 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.

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.

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.