FBL3B (M-15): sc-54495

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BIOTECHNOLOGY

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BACKGROUND

FBL3B is a 434 amino acid protein encoded by the human gene FBXL21. FBL3B contains one 40 amino acid F-box region, making it a member of the F-box family. FBL3B also contains three LRR (leucine-rich) repeats. 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, signaling cascades and developmental programs by targeting proteins, such as cyclins, cyclin-dependent kinase inhibitors, $I\kappa B\alpha$ and β-catenin, for degradation by the proteasome after ubiquitination. FBL3B is a substrate-recognition component of the SCF complex that interacts with Skp1 p19 and CUL-1. FBL3B is also associated with expression and regulation of circadian and cryptochrome proteins.

REFERENCES

1. Winston, J.T., et al. 1999. The SCFβ-TRCP-ubiquitin ligase complex associates specifically with phosphorylated destruction motifs in $I\kappa B\alpha$ and β-catenin and stimulates $I\kappa B\alpha$ ubiquitination *in vitro*. Genes Dev. 13: 270-283.

2. Cenciarelli, C., et al. 1999. Identification of a family of human F-box proteins. Curr. Biol. 9: 1177-1179.

3. Winston, J.T., et al. 1999. A family of mammalian F-box proteins. Curr. Biol. 9: 1180-1182.

4. Ilyin, G.P., et al. 2000. cDNA cloning and expression analysis of new members of the mammalian F-box protein family. Genomics 67: 40-47.

5. Ilyin, G.P., et al. 2002. A new subfamily of structurally related human F-box proteins. Gene 296: 11-20.

6. Siepka, S.M., et al. 2007. Circadian mutant Overtime reveals F-box protein FBXL3 regulation of cryptochrome and period gene expression. Cell 129: 1011-1023.

7. Busino, L., et al. 2007. SCFFbxl3 controls the oscillation of the circadian clock by directing the degradation of cryptochrome proteins. Science 316: 900-904.

CHROMOSOMAL LOCATION

Genetic locus: Fbxl21 (mouse) mapping to 13 B1.

SOURCE

FBL3B (M-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of FBL3B of mouse 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-54495 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

FBL3B (M-15) is recommended for detection of FBL3B of mouse and rat 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); not recommended for mouse isoform 2.

Suitable for use as control antibody for FBL3B siRNA (m): sc-62299, FBL3B shRNA Plasmid (m): sc-62299-SH and FBL3B shRNA (m) Lentiviral Particles: sc-62299-V.

Molecular Weight of FBL3B: 49 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.