

FBL14 (L-12): sc-138269

BACKGROUND

FBL14 (F-box/LRR-repeat protein 14) is a 418 amino acid protein encoded by the human gene FBXL14. FBL14 contains one forty amino acid F-box region, making it a member of the F-box family. FBL14 also contains six 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 κ B- α and β -catenin, for degradation by the proteasome after ubiquitination. FBL14 also interacts with SNAIL1 to mediate its ubiquitination and subsequent degradation.

REFERENCES

- Winston, J.T., Strack, P., Beer-Romero, P., Chu, C.Y., Elledge, S.J. and Harper, J.W. 1999. The SCF b-TrCP-ubiquitin ligase complex associates specifically with phosphorylated destruction motifs in I κ B- α and β -catenin and stimulates I κ B- α ubiquitination *in vitro*. *Genes Dev.* 13: 270-283.
- Cenciarelli, C., Chiaur, D.S., Guardavaccaro, D., Parks, W., Vidal, M. and Pagano, M. 1999. Identification of a family of human F-box proteins. *Curr. Biol.* 9: 1177-1179.
- Winston, J.T., Koepf, D.M., Zhu, C., Elledge, S.J. and Harper, J.W. 1999. A family of mammalian F-box proteins. *Curr. Biol.* 9: 1180-1182.
- Craig, K.L. and Tyers, M. 1999. The F-box: a new motif for ubiquitin dependent proteolysis in cell cycle regulation and signal transduction. *Prog. Biophys. Mol. Biol.* 72: 299-328.
- Ilyin, G.P., Rialland, M., Pigeon, C. and Guguen-Guillouzo, C. 2000. cDNA cloning and expression analysis of new members of the mammalian F-box protein family. *Genomics* 67: 40-47.
- Schulman, B.A., Carrano, A.C., Jeffrey, P.D., Bowen, Z., Kinnucan, E.R., Finnin, M.S., Elledge, S.J., Harper, J.W., Pagano, M. and Pavletich, N.P. 2000. Insights into SCF ubiquitin ligases from the structure of the Skp1-Skp2 complex. *Nature* 408: 381-386.
- Ilyin, G.P., Serandour, A.L., Pigeon, C., Rialland, M., Glaise, D. and Guguen-Guillouzo, C. 2002. A new subfamily of structurally related human F-box proteins. *Gene* 296: 11-20.
- Viñas-Castells, R., Beltran, M., Valls, G., Gómez, I., García, J.M., Montserrat-Sentís, B., Baulida, J., Bonilla, F., de Herreros, A.G. and Díaz, V.M. 2010. The hypoxia-controlled FBXL14 ubiquitin ligase targets SNAIL1 for proteasome degradation. *J. Biol. Chem.* 285: 3794-3805.

CHROMOSOMAL LOCATION

Genetic locus: FBXL14 (human) mapping to 12p13.33; Fbxl14 (mouse) mapping to 6 F1.

STORAGE

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

SOURCE

FBL14 (L-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of FBL14 of human origin.

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-138269 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

FBL14 (L-12) is recommended for detection of FBL14 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 FBL family members.

Suitable for use as control antibody for FBL14 siRNA (h): sc-96221, FBL14 siRNA (m): sc-145088, FBL14 shRNA Plasmid (h): sc-96221-SH, FBL14 shRNA Plasmid (m): sc-145088-SH, FBL14 shRNA (h) Lentiviral Particles: sc-96221-V and FBL14 shRNA (m) Lentiviral Particles: sc-145088-V.

Molecular Weight of FBL14: 46 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.