

FBXW5 (T-16): sc-160329

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, I κ B- α and β -catenin, for proteasomal degradation. FBXW5 (F-box and WD repeat domain containing 5), also known as FBW5, is a 566 amino acid protein that contains one F-box domain and 3 WD repeats. Expressed as multiple alternatively spliced isoforms, FBXW5 functions as a substrate-recognition component of the SCF complex and directly interacts with Skp1 p19 and CUL-1.

REFERENCES

- Bai, C., Sen, P., Hofmann, K., Ma, L., Goebel, M., Harper, J.W. and Elledge, S.J. 1996. Skp1 connects cell cycle regulators to the ubiquitin proteolysis machinery through a novel motif, the F-box. *Cell* 86: 263-274.
- Skowyra, D., Craig, K.L., Tyers, M., Elledge, S.J. and Harper, J.W. 1997. F-box proteins are receptors that recruit phosphorylated substrates to the SCF ubiquitin-ligase complex. *Cell* 91: 209-219.
- 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
- Kipreos, E.T. and Pagano, M. 2000. The F-box protein family. *Genome Biol.* 1: S3002.
- Ilyin, G.P., Serandour, A.L., Pigeon, C., Riolland, M., Glaise, D. and Gugen-Guillouzo, C. 2002. A new subfamily of structurally related human F-box proteins. *Gene* 296: 11-20.
- Hu, J., Zacharek, S., He, Y.J., Lee, H., Shumway, S., Duronio, R.J. and Xiong, Y. 2008. WD40 protein FBW5 promotes ubiquitination of tumor suppressor TSC2 by DDB1-CUL-4-ROC1 ligase. *Genes Dev.* 22: 866-871.
- Glenn, K.A., Nelson, R.F., Wen, H.M., Mallinger, A.J. and Paulson, H.L. 2008. Diversity in tissue expression, substrate binding, and SCF complex formation for a lectin family of ubiquitin ligases. *J. Biol. Chem.* 283: 12717-12729.

CHROMOSOMAL LOCATION

Genetic locus: FBXW5 (human) mapping to 9q34.3; Fbxw5 (mouse) mapping to 2 A3.

SOURCE

FBXW5 (T-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of FBXW5 of human origin.

RESEARCH USE

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

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-160329 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

FBXW5 (T-16) is recommended for detection of FBXW5 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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); non cross-reactive with other FBXW family members.

FBXW5 (T-16) is also recommended for detection of FBXW5 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for FBXW5 siRNA (h): sc-92629, FBXW5 siRNA (m): sc-145143, FBXW5 shRNA Plasmid (h): sc-92629-SH, FBXW5 shRNA Plasmid (m): sc-145143-SH, FBXW5 shRNA (h) Lentiviral Particles: sc-92629-V and FBXW5 shRNA (m) Lentiviral Particles: sc-145143-V.

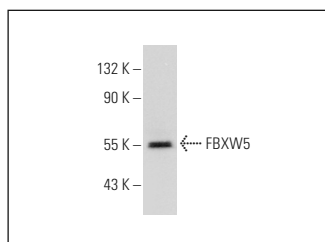
Molecular Weight of FBXW5: 60 kDa.

Positive Controls: rat heart extract: sc-2393.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



FBXW5 (T-16): sc-160329. Western blot analysis of FBXW5 expression in rat heart tissue extract.

STORAGE

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