

FBL7 (A-8): sc-374319

BACKGROUND

FBL7 is a 491 amino acid protein encoded by the human gene FBXL7. FBL7 contains one 40 amino acid F-box region, making it a member of the F-box family. FBL7 also contains ten 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, 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. Localized near the nucleus in the cytoplasm, FBL7 is ubiquitously expressed and believed to recognize and bind to phosphorylated proteins to promote their ubiquitination and degradation.

REFERENCES

1. Winston, J.T., et al. 1999. The SCF β -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.
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.

CHROMOSOMAL LOCATION

Genetic locus: FBXL7 (human) mapping to 5p15.1; Fbxl7 (mouse) mapping to 15 B1.

SOURCE

FBL7 (A-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 367-405 within an internal region of FBL7 of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

FBL7 (A-8) is available conjugated to agarose (sc-374319 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374319 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374319 PE), fluorescein (sc-374319 FITC), Alexa Fluor[®] 488 (sc-374319 AF488), Alexa Fluor[®] 546 (sc-374319 AF546), Alexa Fluor[®] 594 (sc-374319 AF594) or Alexa Fluor[®] 647 (sc-374319 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-374319 AF680) or Alexa Fluor[®] 790 (sc-374319 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-374319 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

RESEARCH USE

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

APPLICATIONS

FBL7 (A-8) is recommended for detection of FBL7 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

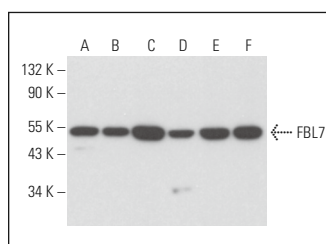
FBL7 (A-8) is also recommended for detection of FBL7 in additional species, including equine, canine, porcine and avian.

Suitable for use as control antibody for FBL7 siRNA (h): sc-62306, FBL7 siRNA (m): sc-62307, FBL7 shRNA Plasmid (h): sc-62306-SH, FBL7 shRNA Plasmid (m): sc-62307-SH, FBL7 shRNA (h) Lentiviral Particles: sc-62306-V and FBL7 shRNA (m) Lentiviral Particles: sc-62307-V.

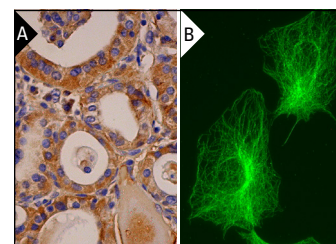
Molecular Weight of FBL7: 55 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, M1 whole cell lysate: sc-364782 or HeLa whole cell lysate: sc-2200.

DATA



FBL7 (A-8): sc-374319. Western blot analysis of FBL7 expression in ARPE-19 (A), Hep G2 (B), HeLa (C), M1 (D), C3H/10T1/2 (E) and RPE-J (F) whole cell lysates.



FBL7 (A-8): sc-374319. Immunoperoxidase staining of formalin fixed, paraffin-embedded human thyroid gland tissue showing cytoplasmic staining of glandular cells (A). Immunofluorescence staining of formalin-fixed Hep G2 cells showing cytoskeletal localization (B).

SELECT PRODUCT CITATIONS

1. Mallampalli, R.K., et al. 2020. Cigarette smoke exposure enhances transforming acidic coiled-coil-containing protein 2 turnover and thereby promotes emphysema. *JCI Insight* 5: e125895.
2. Camuzi, D., et al. 2022. FBXL7 body hypomethylation is frequent in tumors from the digestive and respiratory tracts and is associated with risk-factor exposure. *Int. J. Mol. Sci.* 23: 7801.
3. Zhou, J., et al. 2023. Hypoxia-mediated promotion of glucose metabolism in non-small cell lung cancer correlates with activation of the EZH2/FBXL7/PFKFB4 axis. *Cell Death Dis.* 14: 326.

STORAGE

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

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