

FBL10 (S-15): sc-69477

BACKGROUND

FBXL10 (F-box and leucine-rich repeat protein 10), also known as FBL10, CXXC2 (CXXC-type zinc finger protein 2), PCCX2, KDM2B, JEMMA (jumonji domain, EMSY-interactor, methyltransferase motif protein) or JHDM1B (jumonji C domain-containing histone demethylase 1B), is a nuclear protein that contains one F-box domain, a CXXC-type zinc finger, one JMJC domain, four leucine-rich repeats and one PHD-type zinc finger. FBXL10 belongs to the Fbls class of F-box proteins that contain leucine-rich repeats in addition to their F-box motif. 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. In addition to its role in substrate recognition as a component of the E3 complex, FBXL10 functions as a dimethylation-specific demethylase, binding iron as a cofactor and demethylating lysine-36 of histone H3. This suggests that FBXL10 plays a central role in the histone code.

REFERENCES

1. Winston, J.T., et al. 1999. A family of mammalian F-box proteins. *Curr. Biol.* 9: 1180-1182.
2. Fujino, T., et al. 2000. PCCX1, a novel DNA-binding protein with PHD finger and CXXC domain, is regulated by proteolysis. *Biochem. Biophys. Res. Commun.* 271: 305-310.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 609078. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Jin, J., et al. 2004. Systematic analysis and nomenclature of mammalian F-box proteins. *Genes Dev.* 18: 2573-2580.
5. Suzuki, T., et al. 2006. Tumor suppressor gene identification using retroviral insertional mutagenesis in Blm-deficient mice. *EMBO J.* 25: 3422-3431.
6. Tsukada, Y., et al. 2006. Histone demethylation by a family of JmjC domain-containing proteins. *Nature* 439: 811-816.
7. Frescas, D., et al. 2007. JHDM1B/FBXL10 is a nucleolar protein that represses transcription of ribosomal RNA genes. *Nature* 450: 309-313.
8. Koyama-Nasu, R., et al. 2007. The F-box protein FBL10 is a novel transcriptional repressor of c-Jun. *Nat. Cell Biol.* 9: 1074-1080.

CHROMOSOMAL LOCATION

Genetic locus: KDM2B (human) mapping to 12q24.31; Kdm2b (mouse) mapping to 5 F.

SOURCE

FBL10 (S-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of FBL10 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 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-69477 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-69477 X, 200 µg/0.1 ml.

APPLICATIONS

FBL10 (S-15) is recommended for detection of FBL10 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).

FBL10 (S-15) is also recommended for detection of FBL10 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for FBL10 siRNA (h): sc-75005, FBL10 siRNA (m): sc-75006, FBL10 shRNA Plasmid (h): sc-75005-SH, FBL10 shRNA Plasmid (m): sc-75006-SH, FBL10 shRNA (h) Lentiviral Particles: sc-75005-V and FBL10 shRNA (m) Lentiviral Particles: sc-75006-V.

FBL10 (S-15) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of FBL10: 153 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.

SELECT PRODUCT CITATIONS

1. Tzatsos, A., et al. 2011. Lysine-specific demethylase 2B (KDM2B)-let-7-enhancer of zester homolog 2 (EZH2) pathway regulates cell cycle progression and senescence in primary cells. *J. Biol. Chem.* 286: 33061-33069.

RESEARCH USE

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



Try **FBL10 (5G1): sc-293279**, our highly recommended monoclonal alternative to FBL10 (S-15).