SANTA CRUZ BIOTECHNOLOGY, INC.

FBXO6 (7B11): sc-134339

BACKGROUND

In eukaryotes, degradation of damaged or excess proteins into short peptides is carried out by proteasomes. The proteasomes bind polyubiquitin chains that are added to the target proteins through a phosphorylation-dependent reaction catalyzed by ubiquitin ligases, such as the SCF-type E3 complex containing Skp, Cullin, Rbx1 and F-box proteins. F-box proteins, such as FBXO6 (F-box only protein 6), possess structural motifs used for directly aggregating the substrate while binding to the Skp1 bridge providing for close proximity to the functional E2 ubiquitin-conjugating enzyme, Cullin/Rbx1. FBXO6, also known as FBG2 or FBX6, is a 293 amino acid protein that contains a 40 amino acid binding motif. Human FBXO6 shows significant sequence identity to rat NFB42, a protein related to cell cycle control. High expression of FBXO6 is known in brain, skeletal muscle, spleen, liver and testis.

REFERENCES

1. Cenciarelli, C., et al. 1999. Identification of a family of human F-box proteins. Curr. Biol. 9: 1177-1179.
2. Winston, J.T., et al. 1999. A family of mammalian F-box proteins. Curr. Biol. 9: 1180-1182.
3. 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.
4. Ilyin, G.P., et al. 2002. A new subfamily of structurally related human F-box proteins. Gene 296: 11-20.
5. Jin, J., et al. 2004. Systematic analysis and nomenclature of mammalian F-box proteins. Genes Dev. 18: 2573-2580.

CHROMOSOMAL LOCATION

Genetic locus: FBXO6 (human) mapping to 1p36.22.

SOURCE

FBXO6 (7B11) is a mouse monoclonal antibody raised against recombinant FBXO6 protein of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

FBXO6 (7B11) is recommended for detection of FBXO6 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for FBXO6 siRNA (h): sc-88674, FBXO6 shRNA Plasmid (h): sc-88674-SH and FBXO6 shRNA (h) Lentiviral Particles: sc-88674-V.

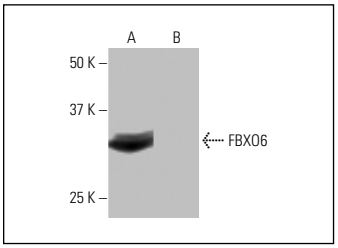
Molecular Weight of FBXO6: 34 kDa.

Positive Controls: human FBXO6 transfected 293T whole cell Lysate.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



FBXO6 (7B11): sc-134339. Western blot analysis of FBXO6 expression in human FBXO6 transfected (**A**) and non-transfected (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Liu, B., et al. 2012. Proteomic identification of common SCF ubiquitin ligase FBXO6-interacting glycoproteins in three kinds of cells. J. Proteome Res. 11: 1773-1781.
2. Huh, J. and Piwnica-Worms, H. 2013. $CRL4^{CDT2}$ targets CHK1 for PCNA-independent destruction. Mol. Cell. Biol. 33: 213-226.
3. Chen, X., et al. 2016. FBXO6-mediated ubiquitination and degradation of Ero1L inhibits endoplasmic reticulum stress-induced apoptosis. Cell. Physiol. Biochem. 39: 2501-2508.
4. Zhao, Q., et al. 2020. PTPS facilitates compartmentalized LTBP1 S-nitrosylation and promotes tumor growth under hypoxia. Mol. Cell 77: 95-107.e5.
5. Ji, M., et al. 2021. FBXO6-mediated RNASET2 ubiquitination and degradation governs the development of ovarian cancer. Cell Death Dis. 12: 317.
6. Li, G., et al. 2022. The USP18-FBXO6 axis maintains the malignancy of ovarian cancer. Biochem. Biophys. Res. Commun. 593: 101-107.
7. Li, L., et al. 2023. BRD7 suppresses tumor chemosensitivity to CHK1 inhibitors by inhibiting USP1-mediated deubiquitination of CHK1. Cell Death Discov. 9: 313.

STORAGE

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

RESEARCH USE

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