

# FBXO47 (M-15): sc-167875

## BACKGROUND

FBXO47 (F-box only protein 47) is a 452 amino acid protein that contains one 40 amino acid F-box region, making it a member of the F-box family. 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,  $\text{I}\kappa\text{B-}\alpha$  and  $\beta$ -catenin, for degradation by the proteasome after ubiquitination. Functioning as a component of the SCF complex, FBXO47 is thought to recognize and bind to select phosphorylated proteins, thereby promoting their ubiquitination and subsequent degradation. FBXO7 is widely expressed with highest expression in kidney, liver and pancreas, and is down-regulated in tumors. Therefore, FBXO47 may be a potential tumor-suppressor gene.

## REFERENCES

1. Winston, J.T., et al. 1999. The SCF $\beta$ -TrCP-ubiquitin ligase complex associates specifically with phosphorylated destruction motifs in  $\text{I}\kappa\text{B-}\alpha$  and  $\beta$ -catenin and stimulates  $\text{I}\kappa\text{B-}\alpha$  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.
4. Craig, K.L., et al. 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.
5. 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.
6. Schulman, B.A., et al. 2000. Insights into SCF ubiquitin ligases from the structure of the Skp1-Skp2 complex. *Nature* 408: 381-386.
7. Ilyin, G.P., et al. 2002. A new subfamily of structurally related human F-box proteins. *Gene* 296: 11-20.
8. Simon-Kayser, B., et al. 2005. Molecular cloning and characterization of FBXO47, a novel gene containing an F-box domain, located in the 17q12 band deleted in papillary renal cell carcinoma. *Genes Chromosomes Cancer* 43: 83-94.

## CHROMOSOMAL LOCATION

Genetic locus: *Fbxo47* (mouse) mapping to 11 D.

## SOURCE

FBXO47 (M-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of FBXO47 of mouse 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 200  $\mu\text{g}$  IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-167875 P, (100  $\mu\text{g}$  peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

FBXO47 (M-15) is recommended for detection of FBXO47 of mouse and rat 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 FBXO family members.

Suitable for use as control antibody for FBXO47 siRNA (m): sc-145131, FBXO47 shRNA Plasmid (m): sc-145131-SH and FBXO47 shRNA (m) Lentiviral Particles: sc-145131-V.

Molecular Weight of FBXO47: 52 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](http://www.scbt.com) or our catalog for detailed protocols and support products.