FNIP2 (S-20): sc-241461



The Power to Question

BACKGROUND

Folliculin is a cytoplasmic protein that is suggested to be involved in the pathogenesis of a uncommon form of kidney cancer through its association with Birt-Hogg-Dube syndrome, an inherited disorder of the hair follicle. FNIP2 (folliculin interacting protein 2), also known as FNIPL or MAP01, is a 1,114 amino acid protein that belongs to the FNIP family and is widely expressed, with highest expression in muscle, nasal mucosa, salivary gland, uvula, fat, liver and pancreas and low expression in renal cell carcinoma and normal kidney tissue. Localized to the cytoplasm, FNIP2 may participate in energy and/or nutrient sensing through the AMPK and FRAP signaling pathways. FNIP2 exists as two alternatively isoforms and forms homomultimers and heteromultimers with FNIP1. FNIP2 interacts with folliculin via its C-terminus and with AMPK α 1, AMPK β 1 and AMPK γ 1 subunits of 5'-AMP-activated protein kinase.

REFERENCES

- Painter, J.N., et al. 2005. A 4-bp deletion in the Birt-Hogg-Dubé gene (FLCN) causes dominantly inherited spontaneous pneumothorax. Am. J. Hum. Genet. 76: 522-527.
- Baba, M., et al. 2006. Folliculin encoded by the BHD gene interacts with a binding protein, FNIP1, and AMPK, and is involved in AMPK and mTOR signaling. Proc. Natl. Acad. Sci. USA 103: 15552-15557.
- 3. Hasumi, H., et al. 2008. Identification and characterization of a novel folliculin-interacting protein FNIP2. Gene 415: 60-67.
- 4. Takagi, Y., et al. 2008. Interaction of folliculin (Birt-Hogg-Dubé gene product) with a novel Fnip1-like (FnipL/Fnip2) protein. Oncogene 27: 5339-5347.
- 5. Koga, S., et al. 2009. Lung cysts in Birt-Hogg-Dubé syndrome: histopathological characteristics and aberrant sequence repeats. Pathol. Int. 59: 720-728.
- 6. Online Mendelian Inheritance in Man, OMIM™. 2009. Johns Hopkins University, Baltimore, MD. MIM Number: 612768. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
- 7. Kluger, N., et al. 2010. Birt-Hogg-Dubé syndrome: clinical and genetic studies of 10 French families. Br. J. Dermatol. 162: 527-537.
- 8. Wang, L., et al. 2010. Serine 62 is a phosphorylation site in folliculin, the Birt-Hogg-Dubé gene product. FEBS Lett. 584: 39-43.
- 9. Linehan, W.M., et al. 2010. The genetic basis of kidney cancer: a metabolic disease. Nat. Rev. Urol. 7: 277-285.

CHROMOSOMAL LOCATION

Genetic locus: FNIP2 (human) mapping to 4q32.1; Fnip2 (mouse) mapping to 3 E3.

SOURCE

FNIP2 (S-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of FNIP2 of human origin.

PRODUCT

Each vial contains 200 μg lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-241461 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

FNIP2 (S-20) is recommended for detection of FNIP2 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); non cross-reactive with FNIP1.

Molecular Weight of FNIP2 isoform 1: 122 kDa.

Molecular Weight of FNIP2 isoform 2: 125 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) with UltraCruz™ Mounting Medium: sc-24941.

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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

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