

#3697 Store at -20°C

# FLCN (D14G9) Rabbit mAb



✓ 100 µl  
(10 western blots)

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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

**Entrez-Gene ID** #201163  
**Swiss-Prot Acc.** #Q8NFG4

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IP Endogenous	H	70 kDa	Rabbit IgG**

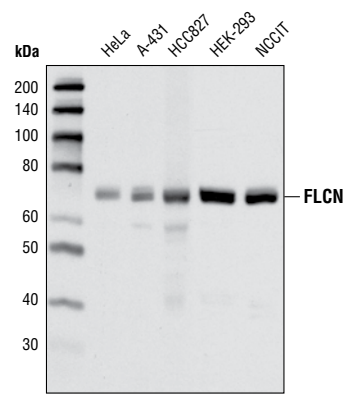
**Background:** The protein folliculin (FLCN) is encoded by the BHD (Birt-Hogg-Dube) gene that is altered in BHD Syndrome, a disorder characterized by the presence of benign connective tissue tumors known as fibrofolliculomas, renal tumors and lung cysts (1). Clinical similarities between BHD and hamartoma-producing disorders caused by TSC2, PTEN and LKB1 gene mutations indicate that FLCN might also be important in nutrient and energy sensing through the mTOR pathway (2). This model is supported by studies demonstrating a direct correlation between the down regulation of BHD and a reduction in mTOR associated phosphorylation of S6 ribosomal protein (3). Mutation of either the TSC1 or TSC2 gene results in elevated mTOR activity (4) while deletion of the TSC2 and BHD homologs in yeast have opposing effects on both mTOR signaling and amino acid homeostasis (5). BHD knock-out mice develop cysts and renal cell tumors similar to those found in BHD patients along with low levels of phosphorylated S6 ribosomal protein (3). Based on these finding, it appears that either abnormally high or abnormally low levels of mTOR signaling might contribute to renal cell carcinogenesis.

**Specificity/Sensitivity:** FLCN (D14G9) Rabbit mAb detects endogenous levels of total FLCN protein.

**Source/Purification:** Monoclonal antibody is produced by immunizing animals with recombinant protein corresponding to the amino terminus of human FLCN.

**Background References:**

- (1) Nickerson, M.L. et al. (2002) *Cancer Cell* 2, 157–64.
- (2) Baba, M. et al. (2006) *Proc Natl Acad Sci USA* 103, 15552–7.
- (3) Hartman, T.R. et al. (2009) *Oncogene* 28, 1594–604.
- (4) Kwiatkowski, D.J. (2003) *Cancer Biol Ther* 2, 471–6.
- (5) van Slechtenhorst, M. et al. (2007) *J Biol Chem* 282, 24583–90.



Western blot analysis of extracts from various cell lines using FLCN (D14G9) Rabbit mAb.

**Storage:** Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

**\*Species cross-reactivity is determined by western blot.**

**\*\*Anti-rabbit secondary antibodies must be used to detect this antibody.**

**Recommended Antibody Dilutions:**

Western blotting	1:1000
Immunoprecipitation	1:100

**For application specific protocols please see the web page for this product at [www.cellsignaling.com](http://www.cellsignaling.com).**

**Please visit [www.cellsignaling.com](http://www.cellsignaling.com) for a complete listing of recommended companion products.**

**IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.**

**Applications Key:** W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide  
**Species Cross-Reactivity Key:** H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine  
 Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.