

#4076 Store at -20°C

# GEF-H1 (55B6) Rabbit mAb



✓ 100 µl  
(10 western blots)

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Entrez-Gene ID #9181  
Swiss-Prot Acc. #Q92974

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IP Endogenous	H, M, R, Mk, Hm	120 kDa	Rabbit IgG**

**Background:** Rho family small GTPases regulate processes such as cell migration, adhesion, proliferation and differentiation. They are activated by guanine nucleotide exchange factors (GEFs), which catalyze the exchange of GDP for GTP. GEF-H1 is a Rho GEF that localizes to microtubules and regulates Rho activity in response to microtubule destabilization (1). Loss of interaction between GEF-H1 and microtubules leads to activation of Rho (2). PAK1 phosphorylates GEF-H1 at Ser885, a site located in the 14-3-3 binding motif. Phosphorylation at this site is required for 14-3-3 binding and correlated to recruitment of 14-3-3 and GEF-H1 to microtubules (3).

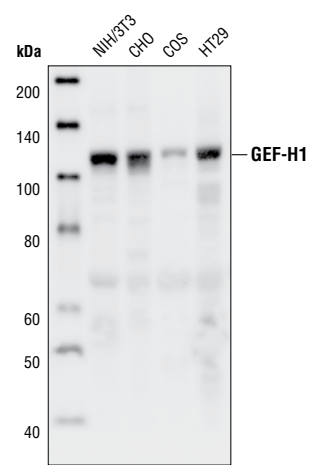
GEF-H1 has also been shown to localize to tight junctions and modulate polarized cell permeability (4,5). GEF-H1 is inactivated by binding to cingulin at epithelial tight junctions, inactivating RhoA and leading to G1/S arrest (5).

**Specificity/Sensitivity:** GEF-H1 (55B6) Rabbit mAb detects endogenous levels of total GEF-H1 protein.

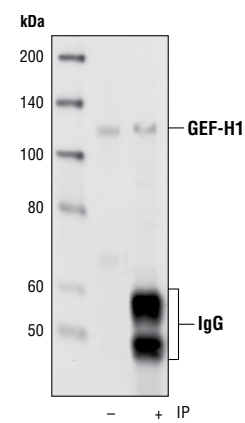
**Source/Purification:** Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to the sequence of human GEF-H1.

**Background References:**

- (1) Ren, Y. et al. (1998) *J. Biol. Chem.* 273, 34954–34960.
- (2) Krendel, M. et al. (2002) *Nat. Cell Biol.* 4, 294–301.
- (3) Zenke, F.T. et al. (2004) *J. Biol. Chem.* 279, 18392–18400.
- (4) Benais-Pont, G. et al. (2003) *J. Cell Biol.* 160, 729–740.
- (5) Aijaz, S. et al. (2005) *Dev. Cell* 8, 777–786.



Western blot analysis of extracts from various cell types, using GEF-H1 (55B6) Rabbit mAb.



Immunoprecipitation of GEF-H1 from HeLa cell extracts, using GEF-H1 (55B6) Rabbit mAb. Western blot was performed using the same antibody.

**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	1:50

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

Please visit [www.cellsignal.com](http://www.cellsignal.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.**

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**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.