

p115 RhoGEF (D25D2) XP® Rabbit mAb



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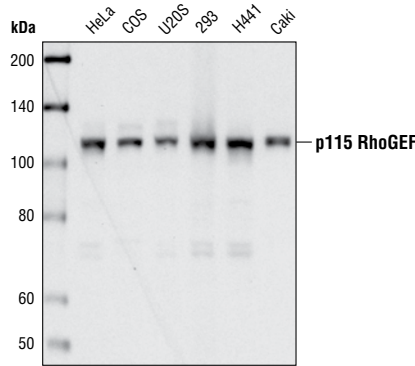
Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IP, IF-IC Endogenous	H, M, R, Mk	115 kDa	Rabbit IgG**

Background: The Rho family small GTPases, including Rho, Rac and cdc42, act as molecular switches, regulating processes such as cell migration, adhesion, proliferation and differentiation. They are activated by guanine nucleotide exchange factors (GEFs), which catalyze the exchange of bound GDP for GTP, and inhibited by GTPase activating proteins (GAPs), which catalyze the hydrolysis of GTP to GDP. A third level of regulation is provided by the stoichiometric binding of Rho GDP dissociation inhibitor (RhoGDI) (1).

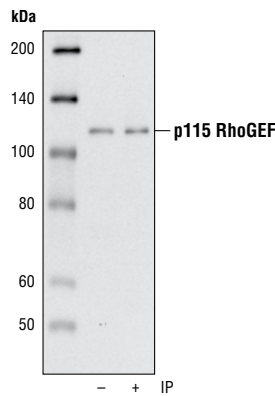
G-protein coupled receptors (GPCRs) at the cell surface signal through heteromeric G proteins to small GTPases such as Rho, which then signal to downstream effector molecules (2). p115 RhoGEF/ArhGEF1 and its family members PDZ-RhoGEF (PRG), and LARG are stimulated by heteromeric G proteins and thus couple signaling from GPCRs to Rho small GTPases (3-6). In a mouse model of asthma, p115 RhoGEF is necessary for T cells to enable airway inflammation and hyperreactivity (7).

Specificity/Sensitivity: p115 RhoGEF (D25D2) XP® Rabbit mAb detects endogenous levels of total p115 RhoGEF protein.

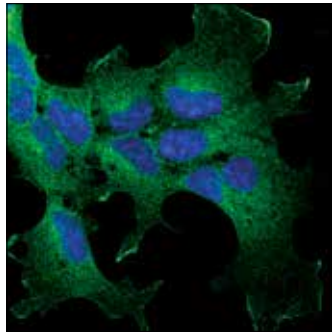
Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the amino terminus of human p115 RhoGEF.



Western blot analysis of extracts from various cell types using p115 RhoGEF (D25D2) XP® Rabbit mAb.



Immunoprecipitation of p115 RhoGEF from COS cells using p115 RhoGEF (D25D2) XP® Rabbit mAb. Western blot was performed using the same antibody. Lane 1 is 5% input.



Confocal immunofluorescent analysis of HEK/293 cells using p115 RhoGEF (D25D2) XP® Rabbit mAb (green). Blue pseudocolor = DRAQ5® #4084 (fluorescent DNA dye).

Entrez-Gene ID #9138
UniProt ID #Q92888

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
Immunofluorescence (IF-IC)	1:50

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

Background References:

- (1) DerMardirossian, C. and Bokoch, G.M. (2005) *Trends Cell Biol* 15, 356–63.
- (2) Morris, A.J. and Malbon, C.C. (1999) *Physiol Rev* 79, 1373–430.
- (3) Chen, Z. et al. (2003) *J Biol Chem* 278, 9912–9.
- (4) Hart, M.J. et al. (1998) *Science* 280, 2112–4.
- (5) Kozasa, T. et al. (1998) *Science* 280, 2109–11.
- (6) Bhattacharyya, R. and Wedegaertner, P.B. (2003) *Biochem J* 371, 709–20.
- (7) Brown, J.P. et al. (2007) *Am J Respir Crit Care Med* 176, 10–9.

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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F—Flow cytometry E-P—ELISA-Peptide

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence
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.