

#3669 Store at -20C

p115 RhoGEF (D25D2) XP® Rabbit mAb



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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications: W, IP, IF-IC	Sensitivity: Endogenous	MW (kDa): 115	Source/Isotype: Rabbit	UniProt ID: #Q92888	Entrez-Gene Id: 9138
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Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:50
Immunofluorescence (Immunocytochemistry)	1:50

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.

Specificity/Sensitivity Source / Purification

p115 RhoGEF (D25D2) XP® Rabbit mAb detects endogenous levels of total p115 RhoGEF protein. Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the amino terminus of human p115 RhoGEF.

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).

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.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

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

Applications Key

W: Western Blotting **IP:** Immunoprecipitation **IF-IC:** Immunofluorescence (Immunocytochemistry)

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