

Store at -20C
#8568**IP3 Receptor 1 (D53A5) Rabbit mAb**

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Applications: W, IP	Reactivity: H M R	Sensitivity: Endogenous	MW (kDa): 320	Source/Isotype: Rabbit IgG	UniProt ID: #Q14643	Entrez-Gene Id: 3708
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Product Usage Information**Application**

Western Blotting
Immunoprecipitation

Dilution

1:1000
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

IP3 Receptor 1 (D53A5) Rabbit mAb recognizes endogenous levels of total IP3R1 protein. This antibody may also detect IP3R2 and IP3R3 as the antigen is highly conserved.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the amino terminus of human IP3R1 protein.

Background

Inositol 1,4,5-triphosphate receptor, also known as IP3R or InsP3R, is a member of the intracellular calcium release channel family and is located in the endoplasmic reticulum. IP3R functions as a Ca²⁺ release channel for intracellular stores of calcium ions. There are three types of IP3 receptors (IP3R1, 2, and 3) that require the second messenger inositol 1,4,5-triphosphate (IP3) for activation (1). Four individual subunits homo- or hetero-oligomerize to form the receptor's functional channel (2). Phosphorylation of IP3R1 at Ser1756 by cyclic AMP-dependent protein kinase A (PKA) regulates the sensitivity of IP3R1 to IP3 and may be a mode of regulation for Ca²⁺ release (3,4). IP3R1-mediated Ca²⁺ release appears to have an effect on the induction of long term depression (LTD) in Purkinje cells (5).

Background References

- Joseph, S.K. (1996) *Cell Signal* 8, 1-7.
- Galvan, D.L. et al. (1999) *J Biol Chem* 274, 29483-92.
- Haug, L.S. et al. (1999) *J Biol Chem* 274, 7467-73.
- DeSouza, N. et al. (2002) *J Biol Chem* 277, 39397-400.
- Inoue, T. et al. (1998) *J Neurosci* 18, 5366-73.

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

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat

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