

Store at
-20C
#73303**CaSR (D6D9V) Rabbit mAb**

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

Applications: W, IP	Reactivity: H M	Sensitivity: Endogenous	MW (kDa): 130, 260	Source/Isotype: Rabbit IgG	UniProt ID: #P41180	Entrez-Gene Id: 846
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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

CaSR (D6D9V) Rabbit mAb recognizes endogenous levels of total CaSR protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Pro368 of human CaSR protein.

Background

CaSR, the extracellular Calcium-Sensing Receptor, is a widely expressed G-protein coupled receptor (GPCR) involved in calcium homeostasis. CaSR operates as a sensor in parathyroid and kidney, and alterations in its activity have been shown to cause thyroid disease in humans (1). Activation of the receptor in response to extracellular calcium or other ligands causes activation of phospholipase C (PLC), release of IP3 and release of calcium from intracellular stores (2). Proinflammatory cytokines IL-1β and TNF-α increase CaSR gene expression in human thyroid and kidney cells through activation of the NF-κB pathway, and this pathway may be involved in hypocalcemia often seen in critically ill patients (3). Elevated calcium concentration and CaSR expression have been linked to proliferation and metastasis of skeletal metastatic prostate cancer cell lines (4). In intestinal epithelial cells, CaSR is involved in regulation of cyclic nucleotide metabolism and the fluid secretion that results in life-threatening fluid loss in response to intestinal pathogens (5). The interaction of CaSR with the actin-binding protein filamin may provide scaffolding for the organization of signaling pathways converging on the cytoskeleton, including CaSR-mediated MAPK pathway activation (6).

Background References

- Hofer, A.M. and Brown, E.M. (2003) *Nat Rev Mol Cell Biol* 4, 530-8.
- Cheng, S.X. et al. (2002) *Am J Physiol Gastrointest Liver Physiol* 283, G240-50.
- Canaff, L. and Hendy, G.N. (2005) *J Biol Chem* 280, 14177-88.
- Liao, J. et al. (2006) *Cancer Res* 66, 9065-73.
- Geibel, J. et al. (2006) *Proc Natl Acad Sci U S A* 103, 9390-7.
- Awata, H. et al. (2001) *J Biol Chem* 276, 34871-9.

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

Cross-Reactivity Key

H: Human **M:** Mouse

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