

CASR Antibody (C-term)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP21649b**Specification**

CASR Antibody (C-term) - Product Information

Application	WB,E
Primary Accession	P41180
Reactivity	Human
Host	Rabbit
Clonality	polyclonal
Isotype	Rabbit IgG
Calculated MW	120675

CASR Antibody (C-term) - Additional Information**Gene ID** 846**Other Names**

Extracellular calcium-sensing receptor, CaSR, Parathyroid cell calcium-sensing receptor 1, PCaR1, CASR, GPRC2A, PCAR1

Target/Specificity

This CASR antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 1009-1045 amino acids from the C-terminal region of human CASR.

Dilution

WB~~1:1000-1:2000

E~~Use at an assay dependent concentration.

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

CASR Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

CASR Antibody (C-term) - Protein Information**Name** CASR {ECO:0000303|PubMed:16740594, ECO:0000312|HGNC:HGNC:1514}**Function** G-protein-coupled receptor that senses changes in the extracellular concentration of calcium ions and plays a key role in maintaining calcium homeostasis (PubMed:[17555508](#),

PubMed:[19789209](#), PubMed:[21566075](#), PubMed:[22114145](#), PubMed:[22789683](#), PubMed:[23966241](#), PubMed:[25104082](#), PubMed:[25292184](#), PubMed:[25766501](#), PubMed:[26386835](#), PubMed:[32817431](#), PubMed:[33603117](#), PubMed:[34194040](#), PubMed:[34467854](#), PubMed:[7759551](#), PubMed:[8636323](#), PubMed:[8702647](#), PubMed:[8878438](#)). Senses fluctuations in the circulating calcium concentration: activated by elevated circulating calcium, leading to decreased parathyroid hormone (PTH) secretion in parathyroid glands (By similarity). In kidneys, acts as a key regulator of renal tubular calcium resorption (By similarity). Ligand binding causes a conformation change that triggers signaling via guanine nucleotide-binding proteins (G-proteins) and modulates the activity of downstream effectors (PubMed:[38632411](#)). CASR is coupled with different G(q)/G(11), G(i)/G(o)- or G(s)-classes of G-proteins depending on the context (PubMed:[38632411](#)). In the parathyroid and kidney, CASR signals through G(q)/G(11) and G(i)/G(o) G-proteins: G(q)/G(11) coupling activates phospholipase C-beta, releasing diacylglycerol (DAG) and inositol 1,4,5-trisphosphate (IP3) second messengers, while G(i)/G(o) coupling mediates inhibition of adenylate cyclase activity (PubMed:[38632411](#), PubMed:[7759551](#)). The G-protein- coupled receptor activity is activated by a co-agonist mechanism: aromatic amino acids, such as Trp or Phe, act concertedly with divalent cations, such as calcium or magnesium, to achieve full receptor activation (PubMed:[27386547](#), PubMed:[27434672](#), PubMed:[32817431](#), PubMed:[33603117](#), PubMed:[34194040](#)). Acts as an activator of the NLRP3 inflammasome via G(i)/G(o)-mediated signaling: down-regulation of cyclic AMP (cAMP) relieving NLRP3 inhibition by cAMP (PubMed:[32843625](#)). Acts as a regulator of proton-sensing receptor GPR68 in a seesaw manner: CASR-mediated signaling inhibits GPR68 signaling in response to extracellular calcium, while GPR68 inhibits CASR in presence of extracellular protons (By similarity).

Cellular Location

Cell membrane; Multi-pass membrane protein

Tissue Location

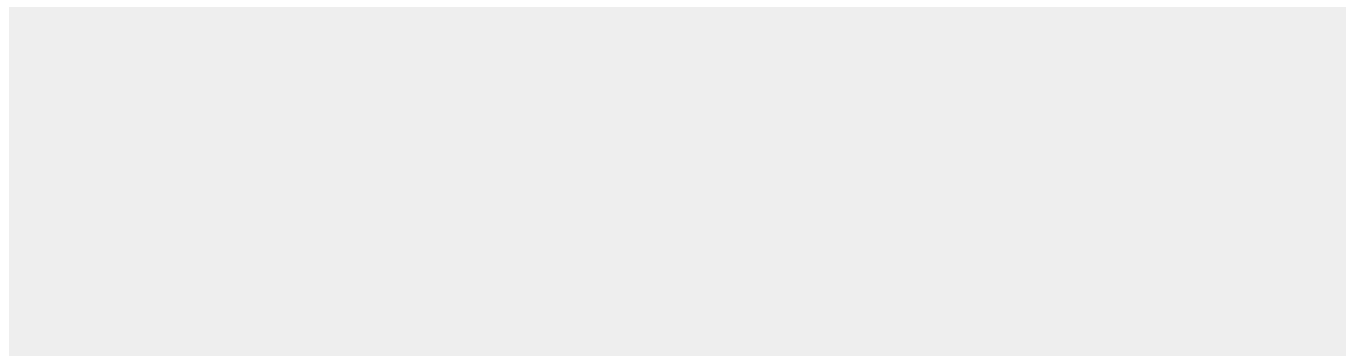
Expressed in the temporal lobe, frontal lobe, parietal lobe, hippocampus, and cerebellum. Also found in kidney, lung, liver, heart, skeletal muscle, placenta.

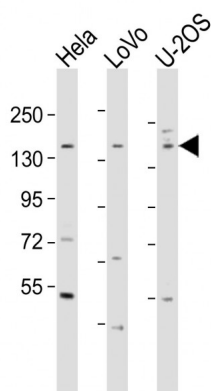
CASR Antibody (C-term) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

CASR Antibody (C-term) - Images





All lanes : Anti-CASR Antibody (C-term) at 1:1000-1:2000 dilution Lane 1: HeLa whole cell lysate Lane 2: LoVo whole cell lysate Lane 3: U-2OS whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 121 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

CASR Antibody (C-term) - Background

Senses changes in the extracellular concentration of calcium ions. The activity of this receptor is mediated by a G- protein that activates a phosphatidylinositol-calcium second messenger system.

CASR Antibody (C-term) - References

Pearce S.H.S.,et al.Submitted (DEC-1994) to the EMBL/GenBank/DDBJ databases.
Garrett J.E.,et al.J. Biol. Chem. 270:12919-12925(1995).
Aida K.,et al.Biochem. Biophys. Res. Commun. 214:524-529(1995).
Freichel M.,et al.Endocrinology 137:3842-3848(1996).
Aida K.,et al.J. Clin. Endocrinol. Metab. 80:2594-2598(1995).