

Rabbit Calcium Sensing Receptor Polyclonal Antibody | anti-CASR antibody

Phospho-Calcium Sensing Receptor (Thr888) Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA321614	Rabbit	Human, Mouse, Rat	ELISA, Immunocytochemistry, Immunofluorescence, Western Blot

PRODUCT SYNONYMS

Calcium Sensing Receptor; Polyclonal Antibody; Phospho-Calcium Sensing Receptor (Thr888) Antibody; Ca sensing receptor; Ca²⁺ sensing receptor 1; Ca²⁺ sensing receptor; CAR; CaSR; CASR_HUMAN; EIG8; Extracellular calcium sensing receptor; Extracellular calcium sensing receptor [Precursor]; Extracellular calcium-sensing receptor; FHH; FIH; GPRC2A; HHC; HHC1; Hypocalciuric hypercalcemia 1; Hypocalciuric hypercalcemia 1 severe neonatal hyperparathyroidism; MGC138441; NSHPT; Parathyroid Ca(2+) sensing receptor 1; Parathyroid Cell calcium sensing receptor; Parathyroid Cell calcium-sensing receptor; PCAR 1; PCaR1; anti-CASR antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	Phospho-Calcium Sensing Receptor (Thr888) antibody detects endogenous levels of Calcium Sensing Receptor only when phosphorylated at Threonine 888
Purity/Purification	From purified rabbit serum by affinity purification via sequential chromatography on phospho-and non-phospho-peptide affinity columns.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	1078
Applicable Applications for anti-CASR antibody	ELISA, ICC (Immunocytochemistry), IF (Immunofluorescence), WB (Western Blot)
Immunogen	A synthesized peptide derived from human Calcium Sensing Receptor around the phosphorylation site of Threonine 888
Subcellular Location	Cell Membrane
Tissue Specificity	Expressed in the temporal lobe, frontal lobe, parietal lobe, hippocampus, and cerebellum. Also found in kidney, lung, liver, heart, skeletal muscle, placenta.
Predicted Cross Reactivity	Pig, Bovine, Horse, Sheep, Rabbit, Dog, Chicken
Similarity	Pig (100%), Bovine (100%), Horse (100%), Sheep (100%), Rabbit (100%), Dog (100%), Chicken (100%)
Conjugation	Unconjugated
Epitope	Phospho Thr888
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



WB (Western Blot)

Western blot analysis of Phospho-Calcium Sensing Receptor (Thr888) expression in various lysates



WB (Western Blot)

Western blot analysis of Calcium Sensing Receptor phosphorylation expression in LOVO whole cell lysates, The lane on the left is treated with the antigen-specific peptide.



IF (Immunofluorescence)

AAA321614 staining HeLa cells by ICC/IF. Cells were fixed with PFA and permeabilized in 0.1% saponin prior to blocking in 10% serum for 45 minutes at 37 degree C. The primary antibody was diluted 1/400 and incubated with the sample for 1 hour at 37 degree C. A Alexa Fluor 594 conjugated goat polyclonal to rabbit IgG (H+L), diluted 1/600 was used as secondary antibody.



IF (Immunofluorescence)

AAA321614 staining LOVO by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100, then blocked in 10% serum for 45 minutes at 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) Ab, diluted at 1/600, was used as the secondary antibody.

ADDITIONAL INFORMATION

Related Product Information for anti-CASR antibody

Description: The calcium-sensing receptor (CASR) functions as a sensor for parathyroid and kidney to determine the extracellular calcium concentration and thus helps to maintain a stable calcium concentration.

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:7759551, PubMed:8702647, PubMed:8636323, PubMed:8878438, PubMed:17555508, PubMed:19789209, PubMed:21566075, PubMed:22114145, PubMed:23966241, PubMed:25292184, PubMed:25104082, PubMed:26386835, PubMed:25766501, PubMed:22789683). Senses fluctuations in the circulating calcium concentration and modulates the production of parathyroid hormone (PTH) in parathyroid glands (By similarity). The activity of this receptor is mediated by a G-protein that activates a phosphatidylinositol-calcium second messenger system (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:27434672, PubMed:27386547).

Subunit Structure: Homodimer; disulfide-linked (PubMed:27434672, PubMed:27386547, PubMed:16740594). Interacts with VCP and RNF19A (PubMed:16513638). Interacts with ARRB1 (By similarity).

Post-translational Modifications: N-glycosylated. Ubiquitinated by RNF19A; which induces proteasomal degradation.

Similarity: The extracellular regions of the homodimer interact in a side-by-side fashion while facing opposite directions (PubMed:27434672, PubMed:27386547). Each extracellular region consists of three domains, LB1 (ligand-binding 1), LB2 and CR (cysteine-rich) (PubMed:17360426). The two lobe-shaped domains LB1 and LB2 form a venus flytrap module (PubMed:27434672, PubMed:27386547). In the inactive configuration, the venus flytrap modules of both protomers are in the open conformation associated with the resting state (open-open) and the interdomain cleft is empty (PubMed:27434672). In addition, each protomer contains three anions, which reinforce the inactive conformation, and one calcium ion (PubMed:27434672). In the active configuration, both protomers of extracellular regions have the closed conformation associated with agonist-binding (closed-closed) (PubMed:27434672, PubMed:27386547). The ligand-binding cleft of each protomer is solely occupied by an aromatic amino-acid (PubMed:27434672, PubMed:27386547). Calcium is bound at four novel sites, including one at the homodimer interface (PubMed:27434672, PubMed:27386547). Agonist-binding induces large conformational changes within the extracellular region homodimer: first, the venus flytrap module of each protomer undergoes domain closure (PubMed:27434672, PubMed:27386547). Second, the LB2 regions of the two protomers approach each other, resulting in an expansion of the homodimer interactions involving LB2 domains (PubMed:27434672, PubMed:27386547). Third, the CR regions of the two subunits interact to form a large homodimer interface that is unique to the active state (PubMed:27434672, PubMed:27386547). The CR regions are brought into close contact by the motion involving LB2 since the two domains are rigidly associated within each subunit (PubMed:27434672, PubMed:27386547). Belongs to the G-protein coupled receptor 3 family.

NCBI AND UNIPROT INFORMATION

NCBI GI #	37577159
NCBI GeneID	846

NCBI Accession #	NP_000379.2
NCBI GenBank Nucleotide #	NM_000388.3
UniProt Accession #	P41180 ; Q13912 ; Q16108 ; Q16109 ; Q16110 ; Q16379 ; Q2M1T0 ; Q4PJ19
Molecular Weight	Observed: 140 kDa Predicted: 121 kDa
NCBI Official Full Name	extracellular calcium-sensing receptor isoform 2
NCBI Official Synonym Full Names	calcium sensing receptor
NCBI Official Symbol	CASR
NCBI Official Synonym Symbols	CAR; FHH; FIH; HHC; EIG8; HHC1; NSHPT; PCAR1; hCasR; GPRC2A; HYPOC1
NCBI Protein Information	extracellular calcium-sensing receptor
UniProt Protein Name	Extracellular calcium-sensing receptor
UniProt Gene Name	CASR
UniProt Synonym Gene Names	CaSR; hCasR1 PublicationManual assertion based on opinion iniRef.14; PCaR11 PublicationManual assertion based on opinion iniRef.19

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

AAA Biotech | Tel: +1 (619) 604-9440 | Fax: +1 (619) 604-9441 | contact@aaabiotech.com

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