

Calcium-sensing receptor (version 2020.5) in the IUPHAR/BPS Guide to Pharmacology Database

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Abstract

The calcium-sensing receptor (CaS, **provisional nomenclature as recommended by NC-IUPHAR [46] and subsequently updated [76]**) responds to multiple endogenous ligands, including extracellular calcium and other divalent/trivalent cations, polyamines and polycationic peptides, L-amino acids (particularly L-Trp and L-Phe), glutathione and various peptide analogues, ionic strength and extracellular pH (reviewed in [77]). While divalent/trivalent cations, polyamines and polycations are CaS receptor agonists [14, 109], L-amino acids, glutamyl peptides, ionic strength and pH are allosteric modulators of agonist function [35, 46, 60, 107, 108]. Indeed, L-amino acids have been identified as "co-agonists", with both concomitant calcium and L-amino acid binding required for full receptor activation [147, 53]. The sensitivity of the CaS receptor to primary agonists is increased by elevated extracellular pH [17] or decreased extracellular ionic strength [108]. This receptor bears no sequence or structural relation to the plant calcium receptor, also called CaS.

Contents

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Calcium-sensing receptor

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Receptors

CaS receptor

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=54>

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