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Taste 2 receptors in GtoPdb v.2025.3

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Abstract

Taste 2 receptors or Bitter taste receptors (TAS2Rs) are G protein-coupled receptors expressed in oral sensory cells and a variety of non-gustatory tissues. The ~25 human TAS2Rs share low amino acid sequence identities with other GPCR families and are classified as broadly tuned "generalist" receptors with numerous, chemically diverse bitter agonists, as narrowly tuned "specialist" receptors with very few activators, as intermediately tuned receptors with an average number of agonists, or receptors specialized to interact with chemically defined activators [39]. The number of functional bitter taste receptor genes varies among species and orthologues might not be functionally conserved. Due to their expression in various tissues, the signal transduction of TAS2Rs is complex. Some TAS2Rs interact with drugs such as analgesic, anti-inflammatory, and antibacterial compounds. The specialist database BitterDB contains additional information on bitter compounds and receptors [16]. Recently, several experimental cryo-electron structures of TAS2Rs have been published [43].

Contents

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Database links

Taste 2 receptors
https://www.guidetopharmacology.org/GRAC/FamilyDisplayForward?familyId=117

Receptors

TAS2R1
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=659

TAS2R2
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=3315

TAS2R3
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=660

TAS2R4
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TAS2R5
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