Data sheet

IFTA AG
Certified QMS according to
DIN EN ISO 9001
Reg. No. IC 03214 034

Jena Bioscience

Gustducin + $\beta_1\gamma_2$
Gustducin + G-protein $\beta_1\gamma_2$-subunits
rat, recombinant, Sf9 insect cells

Cat. No.	Amount
PR-601	1 ml

For *in vitro* use only
Quality guaranteed for 12 months
Store at -80°C

Avoid freeze / thaw cycles

Form
Membrane suspension. Supplied in 75 mM Tris-HCl pH 7.4, 12.5 mM $MgCl_2$ and 1 mM EDTA.

Molecular Weight
40 + 36 kDa

Description

Gustducin is a transducin-like heterotrimeric guanine nucleotide-binding protein (G-protein) expressed in taste receptor cells (TRCs) of the tongue. It is also expressed in the stomach and intestine in brush cells that are scattered throughout the surface epithelium of the gut and share structural features of taste receptor cells of the tongue.

Gustducin was demonstrated to be myristolated and was also palmitoylated in insect cells.

Biochemical and genetic studies have implicated gustducin-α as a key component in the transduction of both bitter and sweet taste.

Gustducin mediates two responses, i.e. a decrease in cyclic nucleotide monophosphates via activation of phosphodiesterase 1A by gustducin-α and activation of phospholipase C-β by released G$\beta\gamma$ subunits.

Gustducin-α has close structural similarity with the visual G-protein, transducin-α.

Gustducin-α reconstituted with the G-protein subunits G$\beta_1\gamma_2$ was prepared from Sf9 cells coinfected with gustducin-α and G$\beta_1\gamma_2$-encoding baculoviruses.

Selected References:

Graziano *et al.* (1989) Expression of $G_{s\alpha}$ in Escherichia coli. Purification and properties of two forms of the protein. *J. Biol. Chem.* **264**:409.
Yu *et al.* (1998) Interaction of the Xanthine Nucleotide Binding $G_{0\alpha}$ Mutant with G Protein-coupled Receptors. *J. Biol. Chem.* **273**:30183.
Gille *et al.* (2003) 2´(3´)-O-(N-Methylanthraniloyl)- substituted GTP Analogs: A Novel Class of Potent Competitive Adenylyl Cyclase Inhibitors. *J. Biol. Chem.* **278**:12672.
Gille *et al.* (2003) GDP Affinity and Order State of the catalytic Site Are Critical for Function of Xanthine Nucleotide-selective $G_{\alpha s}$ Proteins. *J. Biol. Chem.* **278**:7822.

Associated products available from Jena Bioscience

Non-hydrolyzable GTP-analogs (such as GTPγS, GppCp, GppNHp, NPE-caged-GTP...)
Fluorescent GTPs (such as MANT, ANT, TNP, or GTP labeled with a dye of your choice)
Recombinant G-protein signaling reagents (including GAPs, GEFs, heterotrimeric G-proteins, and many more...)

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For further information please visit www.jenabioscience.com.