Data sheet

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Jena Bioscience

$G_{s\alpha S}$
stimulatory heterotrimeric G-protein, short splice variant of the α-subunit
rat, recombinant, Sf9 insect cells

Cat. No.	Amount
PR-505	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
45 kDa

Description
$G_{s\alpha S}$ is the short splice variant of the α-subunit of stimulatory heterotrimeric G_s-proteins. In contrast to the long splice variant ($G_{s\alpha L}$) $G_{s\alpha S}$ lacks the 15-amino acid insert between the Ras like and the α-helical domain.
$G_{s\alpha S}$ activates adenylate cyclase (AC) and possesses a higher GDP-affinity than $G_{s\alpha L}$ (cat.# PR-501).
The differences in GDP-binding between $G_{s\alpha S}$ and $G_{s\alpha L}$ have important consequences for receptor/G-protein coupling and activation.

Selected References:

Graziano *et al.* (1989) Expression of Gsa 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 G0a Mutant with G Protein-coupled Receptors. . *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 Gas Proteins. *J. Biol. Chem.* **278**:7822.
McCusker *et al.* (2008) Refolding of G protein α subunits from inclusion bodies expressed in Escherichia coli. *Protein Expression and Purification* **58(2)**:342-355.

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...)

For further information please visit www.jenabioscience.com.