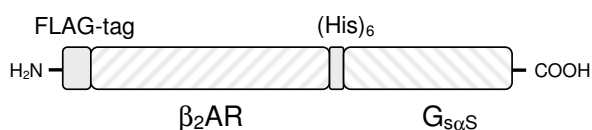


β_2 -AR- $G_{s\alpha S}$

β_2 -Adrenergic Receptor $G_{s\alpha S}$ fusion protein
human, recombinant, Sf9 insect cells

| Cat. No. | Amount |
|----------|--------|
| PR-544 | 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 MgCl₂ and 1 mM EDTA.

Molecular Weight

98 kDa

Activity

1.3 - 7 pmol/mg

Description

β_2 -Adrenergic receptor- $G_{s\alpha S}$ is a fusion protein in which the $G_{s\alpha S}$ N-terminus is linked to the β_2 -adrenoceptor (β_2 AR) C-terminus via a hexahistidine (His₆)-tag.

The β_2 AR is activated by the catecholamine epinephrine and couples to the G-protein G_s to mediate adenylate cyclase (AC) activation. β_2 ARs are found in numerous tissues and cell types including vascular and bronchial smooth muscle cells, leukocytes and liver. β_2 ARs mediate smooth muscle relaxation, inhibition of leukocyte function and activation of glycogenolysis.

$G_{s\alpha S}$ is the short splice variant of the α -subunit of the heterotrimeric G-protein G_s . G_s activates the effector AC. $G_{s\alpha S}$ differs from the long splice variant ($G_{s\alpha L}$) by the absence of a 15-amino acid insert between the raslike domain and the α -helical domain.

$G_{s\alpha S}$ (cat.# PR-505) possesses a higher GDP-affinity than $G_{s\alpha L}$ (cat.# PR-501).

The β_2 AR- $G_{s\alpha S}$ fusion protein ensures a defined 1:1 stoichiometry of the receptor and the $G_{s\alpha S}$ subunit as well as high coupling efficiency. Unlike the β_2 AR- $G_{s\alpha L}$ fusion protein (cat.# PR-532), the β_2 AR- $G_{s\alpha S}$ fusion protein does not exhibit the hallmarks of constitutive activity, e.g. high efficacies of partial agonists and inverse agonists and AC activation by the agonist-free β_2 AR.

The fusion protein contains a N-terminal FLAG-tag® for immunochemical detection.

Selected References:

Seifert *et al.* (1998) Different effects of $G_s\alpha$ splice variants on β_2 -adrenoceptor-mediated signaling. *J. Biol. Chem.* **273**:5109.

Seifert *et al.* (1998) Reconstitution of β_2 -adrenoceptor-GTP-binding-protein interaction in Sf9 cells: High coupling efficiency in β_2 -adrenoceptor- $G_{s\alpha}$ fusion protein. *Eur. J. Biochem.* **255**:369.

Wenzel-Seifert *et al.* (2002) Similarities and differences in the coupling of human β_1 - and β_2 -adrenoreceptors to $G_{s\alpha}$ splice variants. *Biochem. Pharmacol.* **64**:9.