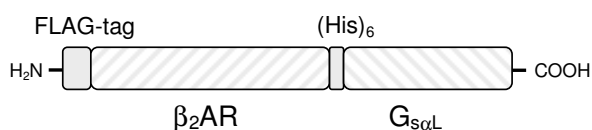


β_2 -AR- $G_{s\alpha L}$
 β_2 -Adrenergic Receptor $G_{s\alpha L}$ fusion protein
human, recombinant, Sf9 insect cells

Cat. No.	Amount
PR-532	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

104 kDa

Receptor expression level

4.8 - 15.5 pmol/mg

Description

β_2 -Adrenergic receptor- $G_{s\alpha L}$ is a fusion protein in which the $G_{s\alpha L}$ 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.

$G_{s\alpha L}$ is the long splice variant of the α -subunit of the heterotrimeric G-protein G_s . G_s activates the effector AC. $G_{s\alpha L}$ differs from the short splice variant ($G_{s\alpha S}$) by a 15-amino acid insert between the ras-like domain and the α -helical domain. $G_{s\alpha L}$ (cat.# PR-501) possesses a lower GDP-affinity than $G_{s\alpha S}$ (cat.# PR-505).

The β_2 -AR- $G_{s\alpha L}$ fusion protein ensures a defined 1:1 stoichiometry of the receptor and the $G_{s\alpha L}$ subunit as well as high coupling efficiency. Compared to the β_2 -AR- $G_{s\alpha S}$ fusion protein (cat.# PR-544), the β_2 -AR- $G_{s\alpha L}$ fusion protein possesses an increased constitutive activity as assessed by the increased efficacies of partial agonists and inverse agonists in the steady-state GTPase assay.

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-bindingprotein 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 -adrenoceptors to $G_{s\alpha}$ splice variants. *Biochem. Pharmacol.* **64**:9.