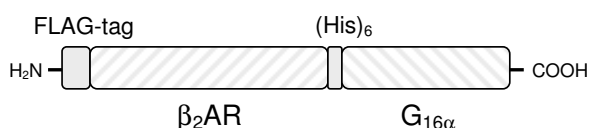


β_2 -AR-G_{16 α} + $\beta_1\gamma_2$

β_2 -Adrenergic Receptor G_{16 α} fusion protein + $\beta_1\gamma_2$ -subunits
 human, recombinant, Sf9 insect cells

Cat. No.	Amount
PR-550	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

90 + 36 kDa

Receptor expression level

2.1 - 3.7 pmol/mg.

Description

β_2 -Adrenergic receptor-G_{16 α} is a fusion protein in which the G_{16 α} 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.

In addition to the AC pathway, β_2 ARs may also activate phospholipase C- β (PLC- β) via G-proteins of the G_q-family. PLC- β catalyzes the cleavage of phosphatidylinositol-4,5-bisphosphate (PIP₂) into the second messengers inositol-1,4,5-trisphosphate (IP₃) and 1,2-diacylglycerol (DAG).

The β_2 AR-G_{16 α} fusion protein ensures a defined 1:1 stoichiometry of the receptor and the G_{16 α} subunit.

Coupling efficiency in the β_2 AR-G_{16 α} fusion protein is lower than in the β_2 AR-G_{s α} fusion proteins (cat.# PR-532 and PR-544) as assessed by high-affinity agonist binding and [³⁵S]GTP- γ S binding.

The β_2 AR contains a N-terminal FLAG-tag® for immunochemical detection.

Selected References:

Offermanns *et al.* (1995) G _{α 15} and G _{α 16} couple a wide variety of receptors to phospholipase C. *J. Biol. Chem.* **270**:15175.

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

Wenzel-Seifert *et al.* (2000) Molecular analysis of β_2 -adrenoceptor coupling to G_s, G_r, and G_q-proteins. *Mol. Pharmacol.* **58**:954.