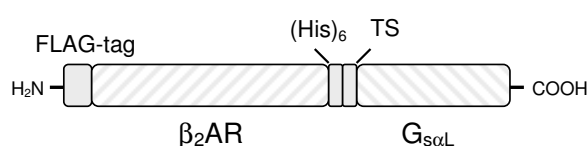


## $\beta_2$ -AR-TS- $G_{s\alpha L}$

$\beta_2$ -Adrenergic Receptor  $G_{s\alpha L}$  fusion protein with a thrombin cleavage site  
 human, recombinant, Sf9 insect cells

Cat. No.	Amount
PR-536	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<sub>2</sub> and 1 mM EDTA.

### Molecular Weight

104 kDa

### Activity

4.2 pmol/mg

### Description

$\beta_2$ -Adrenergic receptor-TS- $G_{s\alpha L}$  is a fusion protein in which the  $G_{s\alpha L}$  N-terminus is linked to the  $\beta_2$ -adrenoceptor ( $\beta_2$ AR) C-terminus via a hexahistidine ( $\text{His}_6$ )-tag. This fusion protein contains a thrombin cleavage site (TS) between the hexahistidine tag and the  $G_{s\alpha L}$  subunit.

The  $\beta_2$ AR is activated by the catecholamine epinephrine and couples to the G-protein  $G_s$  to mediate adenylate cyclase (AC) activation.  $\beta_2$ ARs are found in numerous tissues and cell types including vascular and bronchial smooth muscle cells, leukocytes and liver.

$\beta_2$ ARs mediate smooth muscle relaxation, inhibition of leukocyte function and activation of glycogenolysis.

$G_{s\alpha L}$  is the long splice variant of the  $\alpha$ -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  $\alpha$ -helical domain.  $G_{s\alpha L}$  (cat.# PR-501) possesses a lower GDP-affinity than  $G_{s\alpha S}$  (cat.# PR-505).

The  $\beta_2$ AR-TS- $G_{s\alpha L}$  fusion protein ensures a defined 1:1 stoichiometry of the receptor and the  $G_{s\alpha L}$  subunit as well as high coupling efficiency. Cleavage of the fusion protein with thrombin reduces the efficiency of the  $\beta_2$ AR and  $G_{s\alpha L}$  at undergoing multiple G-protein cycles as assessed by GTPase- and AC activation.

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

### Selected References:

Seifert *et al.* (1999) Examining the efficiency of receptor/G-protein coupling with a cleavable  $\beta_2$ -adrenoceptor- $G_{s\alpha}$  fusion protein. *Eur. J. Biochem.* **260**:661.