Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

Salmeterol (xinafoate)

Catalog No: tcsc1527

Available Sizes

Size: 10mg

Size: 50mg

Size: 100mg

Size: 200mg

Specifications

CAS No:
94749-08-3

Formula:
$C_{36}H_{45}NO_7$

Pathway:
GPCR/G Protein

Target:
Adrenergic Receptor

Purity / Grade:
>98%

Solubility:
DMSO : ≥ 50 mg/mL (82.82 mM)

Alternative Names:
GR 33343X xinafoate

Observed Molecular Weight:
603.75

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Product Description

Salmeterol xinafoate is a long-acting beta-2 adrenergic receptor (**β_2AR**) agonist, with **K_i** of 1.5 nM for WT β_2AR, and used for asthma treatment.

IC50 & Target: Ki: 1.5 nM (WT β_2AR)[2]

In Vitro: Salmeterol significantly inhibits production of pro-inflammatory mediators by RAW264.7 and THP-1 cells. Salmeterol downregulates PgLPS-mediated phosphorylation of the ERK1/2 and JNK but not p38 MAP kinases (MAP-K). Salmeterol also attenuates the activation of NF-κB via inhibition of nuclear translocation of p65-NFκB, the transcriptional activity of NF-κB and IκBα phosphorylation[1]. Salmeterol shows very high selectivity for the WT β2AR (β1 K_i /β2 K_i ratio of approximately 1500) with K_i of 1.5±0.4 nM[2]. Salmeterol prevents phosphorylation levels of IRS-1^{Ser307} induced by tumor necrosis factor-α. Salmeterol alone prevents cell death in retinal Müller cells (p[3]. Salmeterol (100 μM) causes apoptosis of DCs, and can not affect the differentiation and maturation of DCs at 10 μM. Salmeterol (10 μM) decreases the mRNA and protein levels of pro-inflammatory cytokines in LPS-activated DCs and inhibits MAPK and NF-κB activation[4].

In Vivo: The OVA/LPS groups with salmeterol result in a significant decrease in the enhanced AHR in allergic mice in a dose-dependent manner. Salmeterol contends with asthma via regulating the inflammation of the airway of the mice[4].