## Levalbuterol

Pathway:     GPCR/G Protein; Neuronal Signaling       Storage:     Please store the product under the recommended conditions in the Certificate of	Cat. No.: CAS No.: Molecular Formula: Molecular Weight: Target:	HY-B1675 34391-04-3 C <sub>13</sub> H <sub>21</sub> NO <sub>3</sub> 239.31 Adrenergic Receptor	HO HO
Storage: Please store the product under the recommended conditions in the Certificate of	Target: Pathway:	Adrenergic Receptor GPCR/G Protein; Neuronal Signaling	
Analysis.	Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.	

BIOLOGICAL ACTIV			
Description	Levalbuterol ((R)-Albuterol; (R)-Salbutamol) is a short-acting β2-adrenergic receptor agonist and the active (R)-enantiomer of Salbutamol. Levalbuterol is a more potent bronchodilator than Salbutamol and has the potential for the treatment of COPD <sup>[1]</sup> .		
In Vitro	Levalbuterol (10 μM; 24 hours) induces 11β-HSD1 mRNA expression, however, it does not influence 11β-HSD2expression in airway epithelial cells <sup>[1]</sup> . Levalbuterol (10 μM; 24 hours) significantly reduces both LPS- and TNF-α-induced NF-κB activity while increasing GRE activation in an 11β-HSD1 dependent manner in a transformed mouse airway epithelial cell line <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only. RT-PCR <sup>[1]</sup>		
	Cell Line:	Murine Club (MTCC) cells	
	Concentration:	10 μΜ	
	Incubation Time:	24 hours	
	Result:	Increased 11β-HSD1 mRNA expression selectively.	
In Vivo	Levalbuterol (subcutaneous injection; 1 mg/kg; 14 days) significantly decreases pulmonary inflammation in OVA mice, demonstrated a decrease in eosinophilia and IgE <sup>[3]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.		
	Animal Model:	C57BL/6 female mice with a pulmonary allergic model <sup>[3]</sup>	
	Dosage:	1 mg/kg	
	Administration:	Subcutaneous injection; 1 mg/kg; 14 days	
	Result:	Decreased pulmonary inflammation after OVA sensitization.	
		-	

## REFERENCES



[1]. Randall MJ, et al. Anti-inflammatory effects of levalbuterol-induced 11β-hydroxysteroid dehydrogenase type 1 activity in airway epithelial cells. Front Endocrinol (Lausanne). 2015 Jan 12;5:236.

[2]. Ferrada MA, et al. (R)-albuterol decreases immune responses: role of activated T cells.Respir Res. 2008 Jan 14;9:3.

## Caution: Product has not been fully validated for medical applications. For research use only.

 Tel: 609-228-6898
 Fax: 609-228-5909
 E-mail: tech@MedChemExpress.com

 Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA