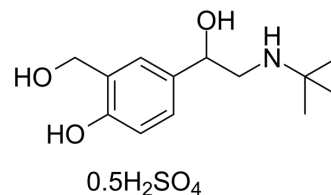


Salbutamol hemisulfate

Cat. No.:	HY-B0436
CAS No.:	51022-70-9
Molecular Formula:	C ₁₃ H ₂₂ NO ₅ S _{0.5}
Molecular Weight:	288.14
Target:	Adrenergic Receptor; Autophagy; Autophagy
Pathway:	GPCR/G Protein; Neuronal Signaling; Autophagy
Storage:	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro	H ₂ O : 100 mg/mL (347.05 mM; Need ultrasonic)					
	DMSO : 2 mg/mL (6.94 mM; Need ultrasonic)					
	Preparing Stock Solutions	Solvent	Mass	1 mg	5 mg	10 mg
		Concentration				
		1 mM		3.4705 mL	17.3527 mL	34.7053 mL
5 mM			0.6941 mL	3.4705 mL	6.9411 mL	
	10 mM		0.3471 mL	1.7353 mL	3.4705 mL	
Please refer to the solubility information to select the appropriate solvent.						
In Vivo	1. Add each solvent one by one: PBS Solubility: 100 mg/mL (347.05 mM); Clear solution; Need ultrasonic					

BIOLOGICAL ACTIVITY

Description	Salbutamol Hemisulfate (Albuterol hemisulfate) is a short-acting β ₂ adrenergic receptor agonist. Target: β ₂ Adrenergic Receptor. Salbutamol Hemisulfate (Albuterol hemisulfate) is a short-acting, selective beta ₂ -adrenergic receptor agonist used in the treatment of asthma and COPD. All the effects of R,S-salbutamol on guinea-pig skeletal muscles are due to the activity of the R-enantiomer. Thus there is a common enantiomeric profile for the skeletal muscle and bronchorelaxant activity of the compound [1]. Short-term Salbutamol intake did appear to improve performance during intense submaximal exercise with concomitant increase in substrate availability and utilization, but the exact mechanisms involved need further investigation [2]. Short-term administration of salbutamol increases voluntary muscle strength in man. However, the magnitude and duration of this effect vary between muscle groups. This study implies that the beta 2-adrenoceptor agonists may be of therapeutic potential in altering skeletal muscle function in humans [3].
IC₅₀ & Target	β adrenergic receptor

CUSTOMER VALIDATION

- Cell Rep. 2019 Dec 3;29(10):2929-2935.e4
- Respir Res. 2022 Dec 28;23(1):380.

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REFERENCES

- [1]. Prior, C., M.B. Leonard, and J.R. McCullough, Effects of the enantiomers of R,S-salbutamol on incompletely fused tetanic contractions of slow- and fast-twitch skeletal muscles of the guinea-pig. *Br J Pharmacol*, 1998. 123(3): p. 558-64.
- [2]. Collomp, K., et al., Effects of short-term oral salbutamol administration on exercise endurance and metabolism. *J Appl Physiol* (1985), 2000. 89(2): p. 430-6.
- [3]. Martineau, L., et al., Salbutamol, a beta 2-adrenoceptor agonist, increases skeletal muscle strength in young men. *Clin Sci (Lond)*, 1992. 83(5): p. 615-21.
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Caution: Product has not been fully validated for medical applications. For research use only.

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