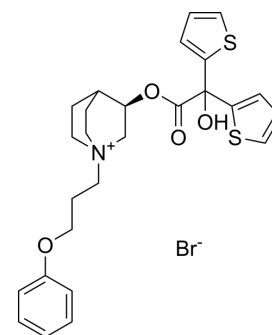


## Acclidinium Bromide

Cat. No.:	HY-14144
CAS No.:	320345-99-1
Molecular Formula:	C <sub>26</sub> H <sub>30</sub> BrNO <sub>4</sub> S <sub>2</sub>
Molecular Weight:	564.55
Target:	mAChR
Pathway:	GPCR/G Protein; Neuronal Signaling
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	DMSO : 33.33 mg/mL (59.04 mM; Need ultrasonic)						
	Preparing Stock Solutions	Solvent Concentration	Mass	1 mg	5 mg	10 mg	
				1 mM	1.7713 mL	8.8566 mL	17.7132 mL
				5 mM	0.3543 mL	1.7713 mL	3.5426 mL
				10 mM	0.1771 mL	0.8857 mL	1.7713 mL
Please refer to the solubility information to select the appropriate solvent.							
In Vivo	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (4.43 mM); Clear solution						
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (4.43 mM); Clear solution						
	3. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (4.43 mM); Clear solution						

### BIOLOGICAL ACTIVITY

Description	Acclidinium Bromide (LAS 34273; LAS-W 330) is a long-acting, inhaled muscarinic antagonist. Acclidinium Bromide has the potential for chronic obstructive pulmonary disease (COPD) research <sup>[1][2][3][4]</sup> .
In Vitro	Preclinically, acclidinium showed potent antagonism of human muscarinic receptors, with a long residence time at M3 receptors and a shorter residence time at M2 receptors, indicating the potential to provide sustained bronchodilation. Acclidinium is rapidly hydrolysed in human plasma, unlike other currently available antimuscarinics including tiotropium. Early clinical studies in healthy subjects have confirmed the low systemic bioavailability and favourable safety profile of single and multiple doses of acclidinium. In a subsequent Phase IIb study, which included 464 patients with moderate to severe COPD, acclidinium displayed long-lasting bronchodilatory activity and was well tolerated.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

## CUSTOMER VALIDATION

- Eur Rev Med Pharmacol Sci. 2019 Jan;23(1):105-112.
- Oncol Lett. 2018 Nov;16(5):6417-6422.
- Tag der mündlichen Prüfung. 07.07.2017.
- Patent. US8815837B2.

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## REFERENCES

- [1]. Cazzola M. Acclidinium bromide, a novel long-acting muscarinic M3 antagonist for the treatment of COPD. *Curr Opin Investig Drugs*. 2009 May;10(5):482-90.
- [2]. Joos GF. Potential for long-acting muscarinic antagonists in chronic obstructive pulmonary disease. *Expert Opin Investig Drugs*. 2010 Feb;19(2):257-64.
- [3]. Sentellas S, Ramos I, Albertí J et al. Acclidinium bromide, a new, long-acting, inhaled muscarinic antagonist: in vitro plasma inactivation and pharmacological activity of its main metabolites. *Eur J Pharm Sci*. 2010 Mar 18;39(5):283-90.
- [4]. Sims MW, Panettieri RA Jr. Profile of acclidinium bromide in the treatment of chronic obstructive pulmonary disease. *Int J Chron Obstruct Pulmon Dis*. 2011;6:457-66.

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

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