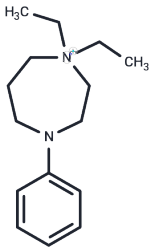
Data Sheet (Cat.No.T26666)

TargetMol

ASM-024

Chemical Properties



CAS No. : 1609534-88-4

Formula: C15H25N2

Molecular Weight: 233.37

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	ASM-024, a potent nicotinic receptor agonist, is a small molecule synthetic piperazine compound that promotes different targets and signaling pathways of β2-adrenergic receptors mediating smooth muscle relaxation, and is a potential compound for the treatment of asthma and chronic obstructive bronchitis with anti-inflammatory activity.
Targets(IC50)	AChR
In vitro	Incubation of HBSMC cells with ASM-024 did not induce significant production of cAMP compared to salbutamol or formoterol treated cells.[1] Fifteen minutes of incubation of hBSMC with ASM-024 alone had no effect on [Ca2+]i. However, a 10 minute pre-treatment with ASM-024 decreased [Ca2+]i rise in cells challenged with 10-6 M histamine or methacholine.[1]
In vivo	ASM-024 increased in vitro relaxation response to maximally effective concentration of short–acting beta-2 agonists in dog and human bronchi.[1] ASM-024 induces smooth muscle relaxation of β2-AR desensitized tracheas.[1]

Solubility Information

Solubility	DMSO: 2.34 mg/mL (10.03 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.285 mL	21.4252 mL	42.8504 mL
5 mM	0.857 mL	4.285 mL	8.5701 mL
10 mM	0.4285 mL	2.1425 mL	4.285 mL
50 mM	0.0857 mL	0.4285 mL	0.857 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Israël-Assayag E,et al. ASM-024, a piperazinium compound, promotes the in vitro relaxation of β2-adrenoreceptor desensitized tracheas. PLoS One. 2015;10(3):e0120095.
Israël-Assayag E, Beaulieu MJ, Cormier Y. ASM-024, a piperazinium compound, promotes the in vitro relaxation of β2-adrenoreceptor desensitized tracheas. PLoS One. 2015 Mar 23;10(3):e0120095. doi: 10.1371/journal.pone.0120095. PubMed PMID: 25799096; PubMed Central PMCID: PMC4370676.
Watson BM, Oliveria JP, Nusca GM, Smith SG, Beaudin S, Dua B, Watson RM, Assayag EI, Cormier YF, Sehmi R, Gauvreau GM. Inhibition of allergen-induced basophil activation by ASM-024, a nicotinic receptor ligand. Int Arch Allergy Immunol. 2014;165(4):255-64. doi: 10.1159/000370068. PubMed PMID: 25660404.
Assayag EI, Beaulieu MJ, Cormier Y. Bronchodilatory and anti-inflammatory effects of ASM-024, a nicotinic receptor ligand, developed for the treatment of asthma. PLoS One. 2014 Jan 22;9(1):e86091. doi: 10.1371/journal.pone.0086091. PubMed PMID: 24465890; PubMed Central PMCID: PMC3899211.