

NS3861

Chemical Properties

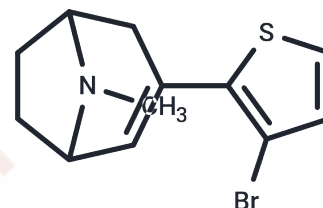
CAS No. : 216853-59-7

Formula: C₁₂H₁₄BrNS

Molecular Weight: 284.22

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	NS3861 is an agonist of nicotinic acetylcholine receptors (nAChRs) that binds with high affinity to heteromeric $\alpha 3\beta 4$ and $\alpha 4\beta 2$ nAChRs, displaying β -subunit preference and no activation at $\alpha 4$ -containing receptors. The maximal efficacy of NS3861 depends on the ligand-binding domain, and a serine to threonine substitution in the principal subunit may explain the lack of activation at $\alpha 4$ -containing receptors.
Targets(IC50)	AChR
In vitro	NS3861 was found to activate wild-type $\alpha 3\beta 4$ nAChRs (Figs. 3R and 4) but did not activate wild-type $\alpha 4\beta 2$. Whereas NS3861 was a partial agonist at $\alpha 3\beta 4$, it proved to be a full agonist at $\alpha 3\beta 2$ albeit with ~ 10 -fold lower potency consistent with the binding affinities. Efficacy at the $\alpha 3/\alpha 4 + \beta 4/\beta 2$ receptor was almost identical to that of wild-type $\alpha 3\beta 4$, whereas no efficacy could be seen at $\alpha 4/\alpha 3 + \beta 2/\beta 4$ [1].

Solubility Information

Solubility	DMSO: 100 mg/mL (351.84 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 4 mg/mL (14.07 mM), Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.5184 mL	17.592 mL	35.184 mL
5 mM	0.7037 mL	3.5184 mL	7.0368 mL
10 mM	0.3518 mL	1.7592 mL	3.5184 mL
50 mM	0.0704 mL	0.3518 mL	0.7037 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

Harpsoe K et al. Molecular determinants of subtype-selective efficacies of cytisine and the novel compound NS3861 at heteromeric nicotinic acetylcholine receptors. J Biol Chem. 2013 Jan 25;288(4):2559-70.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481