

NS1652

Chemical Properties

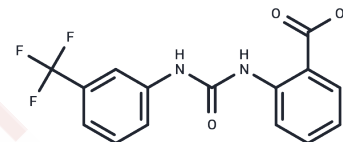
CAS No. : 1566-81-0

Formula: C₁₅H₁₁F₃N₂O₃

Molecular Weight: 324.25

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	NS1652 is an anion conductance inhibitor. NS1652 blocks chloride channel has an IC ₅₀ of 1.6 μM in human and mouse red blood cells.
Targets(IC ₅₀)	Chloride channel
In vitro	NS1652 (20 μM) fully and reversibly inhibits the red cell Cl ⁻ conductance. NS1652 effectively inhibits the chloride conductance (IC ₅₀ , 1.6 μM) in human and mouse red blood cells, but only weakly inhibits VRAC (IC ₅₀ , 125 μM) in HEK293 cells. NS1652 markedly blocks the NO production (IC ₅₀ : 3.1 μM in BV2 cells). NS1652 also down-regulates iNOS expression at 3 μM and fully abolishes at 10 μM in BV2 cells. NS1652 (0, 1.0, 3.3, 10, and 20 μM) induces increasing hyperpolarization due to inhibition of the chloride conductance in normal erythrocytes. NS1652 lowers the net KCl loss from deoxygenated sickle cells from about 12 mM cells/h to about 4 mM cells/h [1][2].
In vivo	In mice, NS1652 (50 mg/kg, i.v.) blocks murine erythrocyte Cl ⁻ conductance by >90%[2].

Solubility Information

Solubility	DMSO: 4.9 mg/mL (15.11 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.084 mL	15.4202 mL	30.8404 mL
5 mM	0.6168 mL	3.084 mL	6.1681 mL
10 mM	0.3084 mL	1.542 mL	3.084 mL
50 mM	0.0617 mL	0.3084 mL	0.6168 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

Kjaer K, et al. Chloride channel blockers inhibit iNOS expression and NO production in IFN γ -stimulated microglial BV2 cells. *Brain Res.* 2009 Jul 24;1281:15-24.

Bennekou P, et al. Volume control in sickle cells is facilitated by the novel anion conductance inhibitor NS1652. *Blood.* 2000 Mar 1;95(5):1842-8.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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