

GW274150

## Chemical Properties

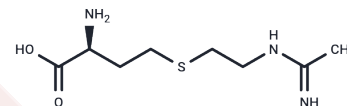
CAS No. : 210354-22-6

Formula: C<sub>8</sub>H<sub>17</sub>N<sub>3</sub>O<sub>2</sub>S

Molecular Weight: 219.3

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	GW274150 is an orally active, selective and potent dual inhibitor of NADPH-dependent human nitric oxide synthase (iNOS) (K <sub>d</sub> =40 nM) and rat inducible nitric oxide synthase (iNOS).GW274150 has a low activity against endothelial nitric oxide synthase (eNOS) and neuronal nitric oxide synthase (nNOS) in humans and rats. GW274150 showed protective effects in an inflammatory model of acute lung injury.
Targets(IC50)	NOS,NO Synthase
In vitro	GW274150 inhibits intracellular iNOS in J774 cells with an IC <sub>50</sub> of 0.2 μM and demonstrates >260-fold and 219-fold selectivity for eNOS and nNOS, respectively, in rat tissue, as well as >100-fold and >80-fold selectivity for human eNOS and nNOS, respectively.[1]
In vivo	GW274150 is a long-acting (half-life in rats is 5 hours) iNOS inhibitor, which can inhibit the LPS-mediated increase in plasma NO <sub>2</sub> - and NO <sub>3</sub> - levels 14 h after a single intraperitoneal administration (ED <sub>50</sub> =3 mg/kg ).[2] GW274150 (2.5, 5, and 10 mg/kg; i.p.; before carrageenan injection; SD rats) reduces the extent of carrageenan-induced lung injury in a dose-related manner. Pleural cavity edema formation and PMN infiltration were also significantly attenuated in a dose-related manner in rats.[2] GW274150 (30 mg/kg; oral; twice daily; 7 days; SD rats) resulted in significant neuroprotection, however, it showed bell-shaped neuroprotection in 6-OHDA rats with Parkinson's disease (PD) Ineffective at high doses in the model.[3]

## Solubility Information

Solubility	DMSO: < 1 mg/mL (insoluble or slightly soluble) H <sub>2</sub> O: 50 mg/mL (228 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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### Preparing Stock Solutions

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	<b>1mg</b>	<b>5mg</b>	<b>10mg</b>
1 mM	4.560 mL	22.7998 mL	45.5996 mL
5 mM	0.912 mL	4.560 mL	9.1199 mL
10 mM	0.456 mL	2.280 mL	4.560 mL
50 mM	0.0912 mL	0.456 mL	0.912 mL

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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

Alderton WK, et al. GW274150 and GW273629 are potent and highly selective inhibitors of inducible nitric oxide synthase in vitro and in vivo. *Br J Pharmacol.* 2005 Jun;145(3):301-12.

Dugo L, et al. Effects of GW274150, a novel and selective inhibitor of iNOS activity, in acute lung inflammation. *Br J Pharmacol.* 2004 Mar;141(6):979-87. Epub 2004 Feb

Broom L, et al. Neuroprotection by the selective iNOS inhibitor GW274150 in a model of Parkinson disease. *Free Radic Biol Med.* 2011 Mar 1;50(5):633-40.

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