

## Dexpramipexole dihydrochloride

## Chemical Properties

CAS No. : 104632-27-1

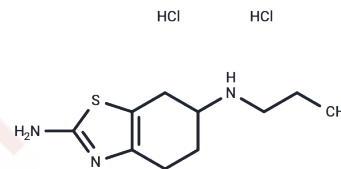
Formula: C<sub>10</sub>H<sub>19</sub>Cl<sub>2</sub>N<sub>3</sub>S

Molecular Weight: 284.25

Store at low temperature

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	Dexpramipexole dihydrochloride (KNS-760704 dihydrochloride) ((R)-Pramipexole dihydrochloride) is a neuroprotective agent and is a weak non-ergoline dopamine agonist.
Targets(IC50)	Dopamine Receptor
In vitro	Dextromethorphan has been found to have neuroprotective effects and is being studied for the treatment of amyotrophic lateral sclerosis (ALS). Dexpramipexole reduces mitochondrial reactive oxygen species (ROS) production, inhibits the activation of apoptosis pathways, and improves cell survival in response to various neurotoxins and $\beta$ -amyloid neurotoxicity. Compared with the S-(-) isomer, dextromethorphan has lower dopamine agonist activity.

## Solubility Information

Solubility	DMSO: 100 mg/mL (351.8 mM),Sonication is recommended. H <sub>2</sub> O: 100 mg/mL (351.8 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

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	1mg	5mg	10mg
1 mM	3.518 mL	17.5901 mL	35.1803 mL
5 mM	0.7036 mL	3.518 mL	7.0361 mL
10 mM	0.3518 mL	1.759 mL	3.518 mL
50 mM	0.0704 mL	0.3518 mL	0.7036 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

- Rudnicki SA, Berry JD, Ingersoll E, et al. Dexamipexole effects on functional decline and survival in subjects with amyotrophic lateral sclerosis in a Phase II study: subgroup analysis of demographic and clinical characteristics. *Amyotroph Lateral Scler Frontotemporal Degener.* 2013 Jan;14(1):44-51.
- Alavian KN, Dworetzky SI, Bonanni L, et al. Effects of dexamipexole on brain mitochondrial conductances and cellular bioenergetic efficiency. *Brain Res.* 2012 Mar 29;1446:1-11.
- Cudkowicz M, Bozik ME, Ingersoll EW, et al. The effects of dexamipexole (KNS-760704) in individuals with amyotrophic lateral sclerosis. *Nat Med.* 2011 Nov 20;17(12):1652-6.
- Bozik ME, Mather JL, Kramer WG, et al. Safety, tolerability, and pharmacokinetics of KNS-760704 (dexamipexole) in healthy adult subjects. *J Clin Pharmacol.* 2011 Aug;51(8):1177-85.
- Cheah BC, Kiernan MC. Dexamipexole, the R(+) enantiomer of pramipexole, for the potential treatment of amyotrophic lateral sclerosis. *IDrugs.* 2010 Dec;13(12):911-20.

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