

## Tacrine

## Chemical Properties

|                   |   |
|-------------------|---|
| CAS No. :         | 321-64-2  |
| Formula:          | C13H14N2  |
| Molecular Weight: | 198.264   |
| Storage:          | Powder: -20°C for 3 years   In solvent: -80°C for 1 year<br>Actual storage temperature shall be subject to the COA. |

## Biological Description

|               |   |
|---------------|---|
| Description   | Tacrine (CS 12602) is an indirect cholinergic agonist and centrally acting anticholinesterase. It is approved for the treatment of Alzheimer's disease. |
| Targets(IC50) | AChR,Cholinesterase (ChE)   |

## Solubility Information

|                     |  |
|---------------------|--|
| Solubility          | DMSO: 242.50 mg/mL (1223.12 mM),Sonication is recommended.<br>H2O: Insoluble,<br>(< 1 mg/ml refers to the product slightly soluble or insoluble)   |
| In vivo Formulation | 10% DMSO+90% Saline: < 10 mg/mL (50.44 mM),Lower concentrations may be soluble, but exact solubility limit is unknown.<br>10% DMSO+40% PEG300+5% Tween 80+45% Saline: 10.00 mg/mL (50.44 mM),Solution.<br><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  | 5.0439 mL | 25.2194 mL | 50.4388 mL |
| 5 mM  | 1.0088 mL | 5.0439 mL  | 10.0878 mL |
| 10 mM | 0.5044 mL | 2.5219 mL  | 5.0439 mL  |
| 50 mM | 0.1009 mL | 0.5044 mL  | 1.0088 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

- Ismaili L, Refouvelet B, Benchekroun M, Brogi S, Brindisi M, Gemma S, Campiani G, Filipic S, Agbaba D, Esteban G, Unzeta M, Nikolic K, Butini S, Marco-Contelles J. Multitarget compounds bearing tacrine- and donepezil-like structural and functional motifs for the potential treatment of Alzheimer's disease. *Prog Neurobiol.* 2016 Jan 18. pii: S0301-0082(15)00162-8. doi: 10.1016/j.pneurobio.2015.12.003. [Epub ahead of print] Review.
- Minarini A, Milelli A, Simoni E, Rosini M, Bolognesi ML, Marchetti C, Tumiatti V. Multifunctional tacrine derivatives in Alzheimer's disease. *Curr Top Med Chem.* 2013;13(15):1771-86. Review. PubMed PMID: 23931443.
- Romero A, Cacabelos R, Oset-Gasque MJ, Samadi A, Marco-Contelles J. Novel tacrine-related drugs as potential candidates for the treatment of Alzheimer's disease. *Bioorg Med Chem Lett.* 2013 Apr 1;23(7):1916-22. doi: 10.1016/j.bmcl.2013.02.017. Epub 2013 Feb 16. Review. PubMed PMID: 23481643.
- Korábečný J, Spilovská K, Benek O, Musílek K, Soukup O, Kuča K. [Tacrine and its derivatives in the therapy of Alzheimers disease]. *Ceska Slov Farm.* 2012 Oct;61(5):210-21. Review. Czech. PubMed PMID: 23256654.

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