

## NQTrp

## Chemical Properties

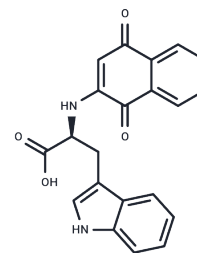
CAS No. : 185351-19-3

Formula: C<sub>21</sub>H<sub>16</sub>N<sub>2</sub>O<sub>4</sub>

Molecular Weight: 360.36

Storage: Store at low temperature, Keep away from moisture  
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	NQTrp is an inhibitor of the aggregation of the tau protein with generic anti-amyloidogenic effects.
Targets(IC50)	Microtubule Associated
In vitro	NQTrp inhibits the in vitro aggregation of hexapeptide (41GCWMLY46 within the N-terminus of $\gamma$ D-crystallin) as well as full-length $\gamma$ D-crystallin. NQTrp effectively inhibits the fibrillation of the GDC6 peptide (50 $\mu$ M) in a dose-dependent manner and prevents the formation of elongated amyloid fibrils[1]. NQTrp has no toxic effect toward retinal cell culture and reduces the cytotoxicity induced by aggregates of the hexapeptide (IC <sub>50</sub> =70 $\mu$ M) in ARPE-19 cells. In TEM analysis, GDC6 peptide fibrils (50 $\mu$ M) in the presence of NQTrp 5:1, 1:1, 1:5 ratio (GDC6: NQTrp)[1].

## Solubility Information

Solubility	DMSO: 125 mg/mL (346.88 mM), Sonication and heating to 60°C are 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 (11.1 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	2.775 mL	13.875 mL	27.750 mL
5 mM	0.555 mL	2.775 mL	5.550 mL
10 mM	0.2775 mL	1.3875 mL	2.775 mL
50 mM	0.0555 mL	0.2775 mL	0.555 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

Malak Abu-Hussien, et al. An amyloidogenic hexapeptide from the cataract-associated  $\gamma$ D-crystallin is a model for the full-length protein and is inhibited by naphthoquinone-tryptophan hybrids. *Int J Biol Macromol.* 2020 Aug 15; 157:424-433.

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