

TRC051384 HCl

Chemical Properties

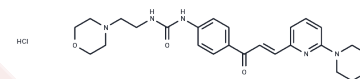
CAS No. : 1333327-56-2

Formula: C₂₅H₃₂ClN₅O₄

Molecular Weight: 502.01

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	TRC051384 is an inducer of heat shock protein Hsp70, activating heat shock factor-1 and enhancing Hsp72 expression in neurons and glial cells.
Targets(IC50)	HSP
In vivo	TRC051384, a novel compound belonging to substituted 2-propen-1-one class is a potent inducer of heat shock protein 70 (HSP70). Treatment with TRC051384 significantly reduces stroke associated neuronal injury (87% reduction in area of penumbra recruited to infarct, and 25% reduction in brain edema) and disability in a rat model of transient ischemic stroke even when administered 8 hours post onset of ischemia. Significant improvement in survival (50% by day 2 and 67.3% by day 7) was observed with TRC051384 treatment initiated at 4 hours after ischemia onset. Induction of HSP70 by TRC051384 involves HSF1 activation and results in elevated chaperone and anti-inflammatory activity. These results show that TRC051384 has the potential to be developed as a novel pharmacological agent for the treatment of ischemic stroke.
Animal Research	Focal cerebral ischemia was produced in rats by occluding the MCA using the intra luminal suture technique. Rats subjected to 2 hours focal cerebral ischemia were administered by intra-peritoneal route, TRC051384 or vehicle every 2 hours for 48 hours, from 4th hour or 8th hour after onset of ischemia. Progression of infarct and edema was assessed up to 48 hours post ischemic insult using magnetic resonance imaging and the neurological disability and survival studied till 7 days.

Solubility Information

Solubility	DMSO: 60 mg/mL (119.52 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	1.992 mL	9.960 mL	19.9199 mL
5 mM	0.3984 mL	1.992 mL	3.984 mL
10 mM	0.1992 mL	0.996 mL	1.992 mL
50 mM	0.0398 mL	0.1992 mL	0.3984 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

Mohanan A , Deshpande S , Jamadarkhana P G , et al. Delayed intervention in experimental stroke with TRC051384 - A small molecule HSP70 inducer[J]. Neuropharmacology, 2011, 60(6):991-999.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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