

# PRODUCT INFORMATION



**TRC051384**

Item No. 29199

**CAS Registry No.:** 867164-40-7

**Formal Name:** N-[2-(4-morpholinyl)ethyl]-N'-[4-[3-[6-(4-morpholinyl)-2-pyridinyl]-1-oxo-2-propen-1-yl]phenyl]-urea

**MF:** C<sub>25</sub>H<sub>31</sub>N<sub>5</sub>O<sub>4</sub>

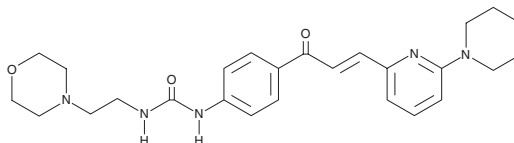
**FW:** 465.5

**Purity:** ≥95%

**Supplied as:** A solid

**Storage:** -20°C

**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

## Laboratory Procedures

TRC051384 is supplied as a solid. A stock solution may be made by dissolving the TRC051384 in the solvent of choice, which should be purged with an inert gas. TRC051384 is soluble in the organic solvent DMSO at a concentration of approximately 50 mg/ml.

## Description

TRC051384 is an inducer of heat shock protein 70 (HSP70) expression.<sup>1</sup> It increases HSP70 mRNA in HeLa cells and primary rat neurons when used at concentrations of 6.3 and 12.5 μM and activates the transcription factor heat shock factor 1 (Hsf1) in a reporter assay using HeLa cells at 25 μM. TRC051384 (1 μM) reduces apoptosis, decreases the levels of malondialdehyde (MDA), and prevents a decrease in the mitochondrial membrane potential induced by *tert*-butyl hydroperoxide in isolated human nucleus pulposus stem cells (NPSCs).<sup>2</sup> Intraperitoneal administration of TRC051384 reduces penumbral incorporation into initial lesions, increases the percentage of animals surviving, and lowers neurological deficit scores in a rat model of cerebral ischemia.<sup>1</sup>

## References

1. Mohanan, A., Deshpande, S., Jamadarkhana, P.G., *et al.* Delayed intervention in experimental stroke with TRC051384—A small molecule HSP70 inducer. *Neuropharmacology* **60(6)**, 991-999 (2011).
2. Zhang, S., Liu, W., Wang, P., *et al.* Activation of HSP70 impedes *tert*-butyl hydroperoxide (t-BHP)-induced apoptosis and senescence of human nucleus pulposus stem cells via inhibiting the JNK/c-Jun pathway. *Mol. Cell. Biochem.* **476(5)**, 1979-1994 (2021).

### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

### WARRANTY AND LIMITATION OF REMEDY

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## CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897  
[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
[WWW.CAYMANCHEM.COM](http://WWW.CAYMANCHEM.COM)