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产品名称: **TRC051384**  
产品别名: **TRC051384**

| 生物活性:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                     |           |            |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-----------|------------|
| Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | TRC051384 is a heat shock protein 70 (HSP70) inducer.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                     |           |            |
| IC <sub>50</sub> & Target                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | HSP70                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                     |           |            |
| In Vitro                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | TRC051384, dose dependently induces HSP70B mRNA by several hundred folds in both HeLa and rat primary mixed neurons. Treatment with TRC051384 results in significant dose-dependent increase in HSF1 transcriptional activity and recovery of luciferase activity. TRC051384 results in 60% inhibition at 6.25 $\mu$ M and 90% inhibition at 12.5 $\mu$ M of LPS-induced TNF- $\alpha$ expression in differentiated THP-1 cell line[1].                                                                                                                                          |                                     |           |            |
| In Vivo                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 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 day2 and 67.3% by day 7) is 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[1]. |                                     |           |            |
| Solvent&Solubility                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>In Vitro:</b><br><b>DMSO : <math>\geq 100</math> mg/mL (214.80 mM)</b><br><br>* ">" means soluble, but saturation unknown.                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                     |           |            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <div>SolventMassConcentration</div> | 1 mg      | 5 mg       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Preparing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 1 mM                                | 2.1480 mL | 10.7402 mL |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Stock Solutions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 5 mM                                | 0.4296 mL | 2.1480 mL  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 10 mM                               | 0.2148 mL | 1.0740 mL  |
| *请根据产品在不同溶剂中的溶解度选择合适的溶剂配制储备液; 一旦配成溶液, 请分装保存, 避免反复冻融造成的产品失效。<br>储备液的保存方式和期限: -80°C, 6 months; -20°C, 1 month。 -80°C 储存时, 请在 6 个月内使用, -20°C 储存时, 请在 1 个月内使用。                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                     |           |            |
| <b>In Vivo:</b><br>请根据您的实验动物和给药方式选择适当的溶解方案。以下溶解方案都请先按照 In Vitro 方式配制澄清的储备液, 再依次添加助溶剂:<br>——为保证实验结果的可靠性, 澄清的储备液可以根据储存条件, 适当保存; 体内实验的工作液, 建议您现用现配, 当天使用; 以下溶剂前显示的百分比是指该溶剂在您配制终溶液中的体积占比; 如在配制过程中出现沉淀、析出现象, 可以通过加热和/或超声的方式助溶<br>1.请依序添加每种溶剂: 10% DMSO→40% PEG300 →5% Tween-80 → 45% saline<br>Solubility: $\geq 2.5$ mg/mL (5.37 mM); Clear solution<br>此方案可获得 $\geq 2.5$ mg/mL (5.37 mM, 饱和度未知) 的澄清溶液。<br>以 1 mL 工作液为例, 取 100 $\mu$ L 25.0 mg/mL 的澄清 DMSO 储备液加到 400 $\mu$ L PEG300 中, 混合均匀, 向上述体系中加入 50 $\mu$ L Tween-80, 混合均匀; 然后继续加入 450 $\mu$ L 生理盐水定容至 1 mL。 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                     |           |            |



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|                       |                                                                                                                                                                                                                                                                                             |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                       | <p>2. 请依序添加每种溶剂: 10% DMSO→ 90% (20% SBE-β-CD in saline)</p> <p>Solubility: ≥ 2.5 mg/mL (5.37 mM); Clear solution</p> <p>此方案可获得 ≥ 2.5 mg/mL (5.37 mM, 饱和度未知) 的澄清溶液。</p> <p>以 1 mL 工作液为例, 取 100 μL 25.0 mg/mL 的澄清 DMSO 储备液加到 900 μL 20% 的 SBE-β-CD 生理盐水水溶液中, 混合均匀。</p>                        |
| References            | [1]. Mohanan A, et al. Delayed intervention in experimental stroke with TRC051384--a small molecule HSP70 inducer. Neuropharmacology. 2011 May;60(6):991-9.                                                                                                                                 |
| 实验参考:                 |                                                                                                                                                                                                                                                                                             |
| Cell Assay            | HeLa cell transiently co-transfected with heat shock elements-luciferase reporter and normalization vector, β-galactosidase are treated with vehicle or TRC051384 (12.5 and 25 μM) for 4 hours. Cell lysates are then prepared and analyzed for luciferase and β-galactosidase activity[1]. |
| Animal Administration | Rats: Injured hemispheres from vehicle treated animals and TRC051384 treated animals are collected at 10-hour post-initiation of tMCAo. Total RNA from each brain sample is extracted followed by cDNA preparation. Each sample of cDNA is analyzed[1].                                     |
| References            | [1]. Mohanan A, et al. Delayed intervention in experimental stroke with TRC051384--a small molecule HSP70 inducer. Neuropharmacology. 2011 May;60(6):991-9.                                                                                                                                 |

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