

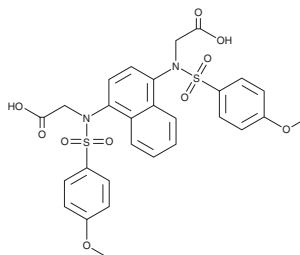
PRODUCT INFORMATION



CPUY192018

Item No. 45473

CAS Registry No.: 1567836-15-0
Formal Name: N,N'-1,4-naphthalenediylbis[N-[(4-methoxyphenyl)sulfonyl]-glycine]
MF: C₂₈H₂₆N₂O₁₀S₂
FW: 614.6
Purity: ≥98%
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

CPUY192018 is supplied as a solid. A stock solution may be made by dissolving the CPUY192018 in the solvent of choice, which should be purged with an inert gas. CPUY192018 is soluble (≥10 mg/ml) in DMSO.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of CPUY192018 can be prepared by directly dissolving the solid in aqueous buffers. CPUY192018 is slightly soluble (0.1-1 mg/ml) in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

Description

CPUY192018 is an inhibitor of the Kelch-like ECH-associated protein 1 (Keap1) and nuclear factor erythroid 2-related factor 2 (Nrf2) protein-protein interaction (IC₅₀ = 28.5 nM in a TR-FRET assay).¹ It induces Nrf2-mediated transcriptional activity in a reporter assay using HepG2 cells.² CPUY192018 (10 μM) prevents apoptosis and S-phase cell cycle arrest induced by dextran sulfate (DSS; Item No. 23250) and reduces DSS-induced increases in reactive oxygen species (ROS) levels in NCM460 human colon mucosal epithelial cells.³ It also reduces colon shortening and mucosal tissue injury and inflammation in a mouse model of DSS-induced ulcerative colitis. Subcutaneous or topically administered CPUY192018 improves visual function in a rat model of retinal ischemia-reperfusion injury.⁴

References

1. Lee, S., Abed, D.A., Nguyen, M.-U., *et al.* Structure-activity relationships of 1,4-bis(arylsulfonamido)-benzene or naphthalene-N,N'-diacetic acids with varying C2-substituents as inhibitors of Keap1-Nrf2 protein-protein interaction. *Eur. J. Med. Chem.* **237**:114380, (2022).
2. Jiang, Z.-Y., Xu, L.L., Lu, M.-C., *et al.* Structure-activity and structure-property relationship and exploratory in vivo evaluation of the nanomolar Keap1-Nrf2 protein-protein interaction inhibitor. *J. Med. Chem.* **58**(16), 6410-6421 (2015).
3. Lu, M.-C., Ji, J.-A., Jiang, Y.-L., *et al.* An inhibitor of the Keap1-Nrf2 protein-protein interaction protects NCM460 colonic cells and alleviates experimental colitis. *Sci. Rep.* **6**:26585, (2016).
4. Hui, Q., Karlstetter, M., Xu, Z., *et al.* Inhibition of the Keap1-Nrf2 protein-protein interaction protects retinal cells and ameliorates retinal ischemia-reperfusion injury. *Free Radic. Biol. Med.* **146**, 181-188 (2020).

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.

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