Heme Oxygenase-1-IN-1 hydrochloride

Cat. No.: HY-111798A

CAS No.: 1092851-70-1

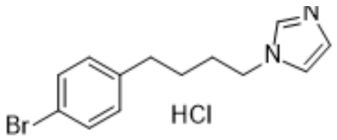
Molecular Formula: $C_{13}H_{16}BrClN_2$

Molecular Weight: 315.64

Target: Reactive Oxygen Species

Pathway: Immunology/Inflammation; Metabolic Enzyme/Protease; NF-κB

Storage: 4°C, sealed storage, away from moisture
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 125 mg/mL (396.02 mM; Need ultrasonic)
H_2O : 100 mg/mL (316.82 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	3.1682 mL	15.8408 mL	31.6817 mL
5 mM	0.6336 mL	3.1682 mL	6.3363 mL
10 mM	0.3168 mL	1.5841 mL	3.1682 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: PBS
   Solubility: 100 mg/mL (316.82 mM); Clear solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.08 mg/mL (6.59 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (6.59 mM); Clear solution
4. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (6.59 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Heme Oxygenase-1-IN-1 (Compound 2) hydrochloride is a heme oxygenase 1 (HO-1) inhibitor with an IC_{50} of 0.25 μM[1].

IC_{50} & Target

IC_{50}: 0.25 μM (HO-1)[1]

In Vitro

Heme Oxygenase-1-IN-1 hydrochloride (0-10 μM) attenuates Dipeptidyl peptidase-4 inhibitors (DPP-4i)-induced NF-κB activation in 4T1 cells[2].

Heme Oxygenase-1-IN-1 hydrochloride (0-10 μM) significantly decreases GC cell migration and invasion in parental gastric cancer cells[3].
Heme Oxygenase-1-IN-1 hydrochloride significantly down-regulates HO-1 mRNA level and metastasis-associated gene expressions in GRIM-19-deficient gastric cancer cells[3].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Cell Death Dis. 2022 Sep 26;13(9):822.
- Free Radic Biol Med. 2023 Mar 27;202:46-61.
- Front Oncol. 24 September 2021.
- Front Oncol. 2021 May 26;11:679816.
- Nitric Oxide. 8 October 2022.

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REFERENCES

[1]. Zeng X, et al. Mitochondrial GRIM-19 loss in parietal cells promotes spasmolytic polypeptide-expressing metaplasia through NLR family pyrin domain-containing 3 (NLRP3)-mediated IL-33 activation via a reactive oxygen species (ROS) -NRF2- Heme oxygenase-1(HO-1)-NF-κB axis. Free Radic Biol Med. 2023 Jun;202:46-61.

[2]. Wang X, et al. Mitochondrial GRIM-19 deficiency facilitates gastric cancer metastasis through oncogenic ROS-NRF2-HO-1 axis via a NRF2-HO-1 loop. Gastric Cancer. 2021 Jan;24(1):117-132.

[3]. Floresta G, et al. Development of new HO-1 inhibitors by a thorough scaffold-hopping analysis. Bioorg Chem. 2018 Dec;81:334-339.

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