Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

Disufenton sodium

Catalog No: tcsc0489

Available Sizes

Size: 10mg

Size: 50mg

Size: 100mg

Specifications

CAS No:
168021-79-2

Formula:
$C_{11}H_{13}NNa_2O_7S_2$

Pathway:
Others

Target:
Others

Purity / Grade:
>98%

Solubility:
H2O : ≥ 50 mg/mL (131.12 mM)

Alternative Names:
NXY-059

Observed Molecular Weight:
381.33

Product Description

Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

Disufenton sodium (NXY-059) is the disulfonyl derivative of the neuroprotective spin trap phenylbutynitrone(PBN), both NXY-059, its parent PBN and their hydrolysis/oxidation product MNT are very powerful scavengers of free radicals.

IC50 value:

Target: Neuroprotectant

in vitro: Disufenton sodium is more soluble than the spin trapping agent α-phenyl-N-tert-butyl nitrone (PBN) [1]. In an in vitro blood-brain barrier (BBB) model, 250 mM of Disufenton sodium administered at the onset or up to 4 h after oxygen glucose deprivation (OGD) produces a significant reduction in the increased BBB permeability caused by OGD. Furthermore, OGD produces a huge influx of tissue plasminogen activator across the BBB, which is substantially reduced by Disufenton sodium [2].

in vivo: Disufenton sodium reduces infarct volume in rats subjected to 2 hours of middle cerebral artery occlusion in a dose-dependent manner. At equimolar doses (3.0 mg/kg for Disufenton sodium and 1.4 mg/kg for PBN), Disufenton sodium is more efficacious than PBN. Similar results are obtained when a recovery period of 7 days is allowed. The window of therapeutic opportunity for Disufenton sodium is 3 to 6 hours after the start of recirculation [1]. Disufenton sodium, a free radical-trapping agent, has a substantial protective effect, lessening the disability caused by an experimentally induced stroke in a primate species. Disufenton sodium treatment reduces the overall amount of brain damage by >50% of saline-treatment values, with similar levels of protection afforded to both white and gray matter [3].