

Product Data Sheet

Product Name: Cinnabarinic acid

Cat. No.: GC12705

Chemical Properties

Cas. No. 606-59-7

Chemical Name 2-amino-3-oxo-3H-phenoxazine-1,9-dicarboxylic acid

SMILES O=C1C(N)=C(C(O)=O)C2=NC3=C(C(O)=O)C=CC=C3OC2=C1

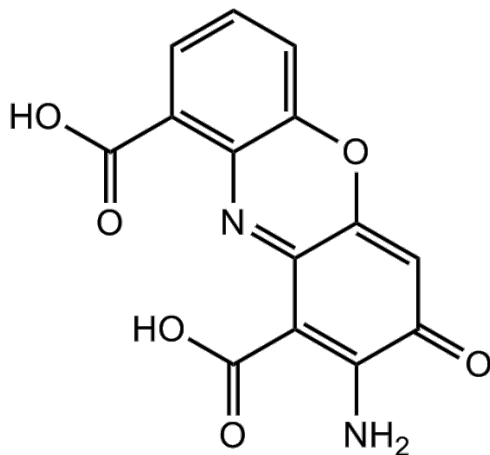
Formula $C_{14}H_8N_2O_6$ M.Wt 300.22

Solubility DMSO: 25 mM (warmed) Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure



Background

Cinnabarinic acid is a phenoxazinone produced by the oxidative dimerization of 3-hydroxyanthranilic acid (3-HAA) as part of the metabolism of tryptophan in the kynurenic pathway.[1],[2] It acts as a

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

partial receptor agonist of the metabotropic glutamate receptor 4 (mGlu4), effective at 100 μ M, with no activity at other mGlu receptor subtypes.[3] 3-HAA does not affect mGlu receptors, including mGlu4. Cinnabarinic acid induces apoptosis of T cells at 300-500 μ M, a potency some ten times that of 3-HAA.[4]

Reference:

- [1]. Subba Rao, P.V., and Vaidyanathan, C.S. Enzymic conversion of 3-hydroxyanthranilic acid into cinnabarinic acid. Partial purification and properties of rat-liver cinnabarinate synthase. *Biochemistry Journal* 99(2), 317-322 (1966).
- [2]. Stone, T.W., Stoy, N., and Darlington, L.G. An expanding range of targets for kynurenine metabolites of tryptophan. *Trends in Pharmacological Sciences* 34(2), 136-143 (2013).
- [3]. Fazio, F., Lionetto, L., Molinaro, G., et al. Cinnabarinic acid, an endogenous metabolite of the kynurenine pathway, activates type 4 metabotropic glutamate receptors. *Molecular Pharmacology* 81(5), 643-656 (2012).
- [4]. Hiramatsu, R., Hara, T., Akimoto, H., et al. Cinnabarinic acid generated from 3-hydroxyanthranilic acid strongly induces apoptosis in thymocytes through the generation of reactive oxygen species and the induction of caspase. *Journal of Cellular Biochemistry* 103(1), 42-53 (2008).

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA