

Product Data Sheet

Product Name: 3-hydroxy Anthranilic Acid

Cat. No.: GC13377

Chemical Properties

Cas. No. 548-93-6

Chemical Name 2-amino-3-hydroxy-benzoic acid

SMILES OC(C1=C(N)C(O)=CC=C1)=O

Formula $C_7H_7NO_3$ M.Wt 153.1

Solubility $\leq 30\text{mg/ml}$ in ethanol; 30mg/ml in DMSO; 30mg/ml in dimethyl formamide 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.

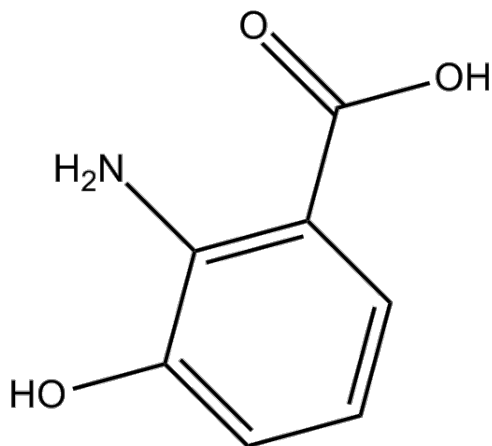
Caution: Product has not been fully validated for medical applications. For research use only.

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

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

Product Data Sheet

Structure



Background

3-Hydroxyanthranilic acid (3-HAA) is an intermediate in the metabolism of the amino acid tryptophan. 3-HAA is an aminobenzoic acid generated by substitution of benzoic acid at C-2 with an amine group and at C-3 by a hydroxy group. 3-Hydroxyanthranilic acid is a new antioxidant isolated from methanol extract of tempeh [1].

Tryptophan metabolism by the kynurenine pathway (KP) plays an important role in the pathogenesis of inflammatory, infectious, and degenerative diseases [2]. 3-HAA effectively suppressed glial cytokine and chemokine expression and reduced cytokine-induced neuronal death [2]. In astrocytes, 3-HAA induced the expression of hemeoxygenase-1 (HO-1), an antioxidant enzyme with anti-inflammatory and cytoprotective properties. In cultured adult human astrocytes, 3-HAA induced HO-1 expression, which has also been observed after injection to mouse brains [2]. 3-HAA acted as a co-antioxidant for α -tocopherol, inhibiting human low density lipoprotein and plasma lipid peroxidation [3]. 3-HAA inhibited nitric oxide (NO) synthase in macrophages and stimulated TGF- β production, suppressing pro-inflammatory activity of Th1 cells [1].

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

References:

- [1] Stone T W, Stoy N, Darlington L G. An expanding range of targets for kynurenine metabolites of tryptophan[J]. Trends in pharmacological sciences, 2013, 34(2): 136-143.
- [2] Krause D, Suh H S, Tarassishin L, et al. The tryptophan metabolite 3-hydroxyanthranilic acid plays anti-inflammatory and neuroprotective roles during inflammation: role of hemeoxygenase-1[J]. The American journal of pathology, 2011, 179(3): 1360-1372.
- [3] Thomas, S. R., Wittig, P.K. and Stocker, R. 3-Hydroxyanthranilic acid is an efficient, cell-derived co-antioxidant for α -tocopherol, inhibiting human low density lipoprotein and plasma lipid peroxidation. The Journal of Biological Chemistry 271, 2714-32721 (1996).

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