
Product Data Sheet

Product Name: L-Alanosine

Cat. No.: GC18283

Chemical Properties

Cas. No. 5854-93-3

Chemical Name 3-(hydroxynitrosoamino)-L-alanine

SMILES ON(N=O)C[C@H](N)C(O)=OFormula $C_3H_7N_3O_4$ M.Wt 149.1

Solubility 100 mM HCl: 1 mg/ml, 100 mM NaOH: 1 mg/ml, Water: 1 mg/ml Storage Store at -20°C, unstable in solution, ready to use.

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 sizes: ship with RT, or blue ice upon request.

Structure **Background**

L-Alanosine (NSC-153353), an antibiotic from *Streptomyces alanosinicus*, has antineoplastic activity. L-Alanosine (NSC-153353) inhibits adenylosuccinate synthetase, which converts inosine monophosphate (IMP) into adenylosuccinate. L-Alanosine (NSC-153353) blocks the common de novo purine biosynthesis pathway and, thereby, inhibits tumor cells with MTAP deficiency [1][2][3].

References:

- [1]. Efferth T, et al. Identification of gene expression profiles predicting tumor cell response to L-alanosine. *Biochem Pharmacol.* 2003 Aug 15;66(4):613-21.
- [2]. Chitnis MP, et al. Antitumor effect of L-alanosine (NSC 153553) on sensitive and resistant sublines of murine leukemias. *Tumori.* 1984 Aug 31;70(4):317-20.
- [3]. Tyagi AK, et al. Identification of the antimetabolite of L-alanosine, L-alanosyl-5-amino-4-imidazolecarboxylic acid ribonucleotide, in tumors and assessment of its

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

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inhibition of adenylosuccinate synthetase. Cancer Res. 1980 Dec;40(12):4390-7.

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