

Product Data Sheet

Product Name: NBTGR
Cat. No.: GC32500

Chemical Properties

Cas. No. 13153-27-0

SMILES OC[C@@H]1[C@H]([C@H]([C@H](N2C=NC3=C2N=C(N)N=C3SCC4=CC=C([N+])([O-])=O)C=C4)O1)O)O

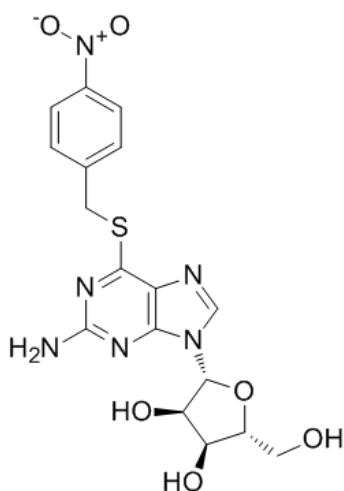
Formula $C_{17}H_{18}N_6O_6S$ M.Wt 434.43

Solubility DMSO : 100 mg/mL (230.19 mM; Need ultrasonic) 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

NBTGR (p-Nitrobenzylthioguanosine) is a potent inhibitor of nucleoside transport; inhibits adenosine uptake with a K_i of 70 nM.

A group of purine ribonucleosides with alkarylmercapto substituents at the purine 6-position are potent inhibitors of several aspects of nucleoside metabolism that involved the transfer of ribosyl

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

groups. NBTGR is one of the compounds that inhibits nucleoside transport by human erythrocytes; initial rates of uridine uptake are reduced to zero upon exposure of cells to 1 μ M NBTGR. The inhibitor is firmly bound because repeated washing cannot restore uridine transport capability to NBTGR-treated cells. NBTGR inhibits the influx of uridine, inosine, and cytidine, without inhibiting the uptake of the corresponding bases, or that of D-glucose or L-leucine. Uridine antagonizes the NBTGR inhibition of uridine transport in a concentration-dependent manner. NBTGR and related compounds appear to interact with the mechanism for the facilitated transport of nucleosides[2].

[1]. Turnheim K, et al. Inhibition of adenosine uptake in human erythrocytes by adenosine-5'-carboxamides, xylosyladenine, dipyridamole, hexobendine, and p-nitrobenzylthioguanosine. *Biochem Pharmacol.* 1978;27(18):2191-7. [2]. Parterson A, et al. Nucleoside Transport II Inhibition by p-Nitrobenzylthioguanosine and Related Compounds. *Can. J. Biochem.* 49,271-274 (1971)

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