

Product Data Sheet

Product Name: Dipyridamole

Cat. No.: GC17673

Chemical Properties

Cas. No. 58-32-2

Chemical Name 2-[[2-[bis(2-hydroxyethyl)amino]-4,8-di(piperidin-1-yl)pyrimido[5,4-d]pyrimidin-6-yl]-(2-hydroxyethyl)amino]ethanol

SMILES C1CCN(CC1)C2=NC(=NC3=C2N=C(N=C3N4CCCCC4)N(CCO)CCO)N(CCO)CCO

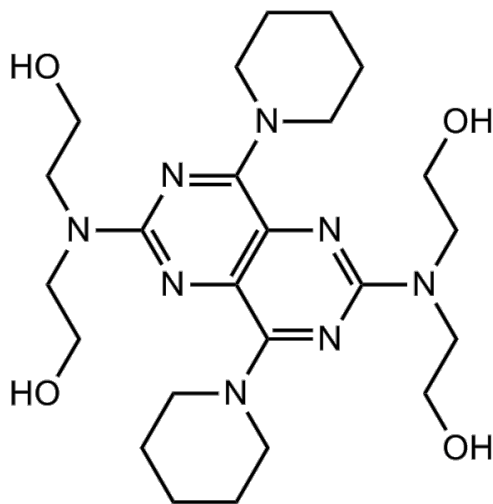
Formula $C_{24}H_{40}N_8O_4$ M.Wt 504.63

Solubility $\geq 15.55\text{mg/mL}$ in DMSO Storage 4°C , protect from light

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

Dipyridamole (Persantine) is a phosphodiesterase inhibitor that blocks uptake and metabolism of adenosine by erythrocytes and vascular endothelial cells. Target: Phosphodiesterase (PDE). Dipyridamole concentrations of 1 nmol/ml blood caused 90% inhibition of adenosine metabolism. Dipyridamole at therapeutic concentrations causes significant inhibition of adenosine

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

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metabolism in whole blood [1]. Dipyridamole has a dose-dependent inhibitory effect on thromboxane synthesis which was independent of aggregation. Dipyridamole also inhibited malonyldialdehyde production in response to both thrombin and arachidonic acid [2]. Dipyridamole enhances platelet inhibition by amplifying the signaling of the NO donor sodium nitroprusside. These data support the concept that enhancement of endothelium-dependent NO/cGMP-mediated signaling may be an important in vivo component of dipyridamole action [3].

References:

- [1]. Klabunde, R.E., Dipyridamole inhibition of adenosine metabolism in human blood. Eur J Pharmacol, 1983. 93(1-2): p. 21-6.
- [2]. Best, L.C., et al., Mode of action of dipyridamole on human platelets. Thromb Res, 1979. 16(3-4): p. 367-79.
- [3]. Aktas, B., et al., Dipyridamole enhances NO/cGMP-mediated vasodilator-stimulated phosphoprotein phosphorylation and signaling in human platelets: in vitro and in vivo/ex vivo studies. Stroke, 2003. 34(3): p. 764-9.

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