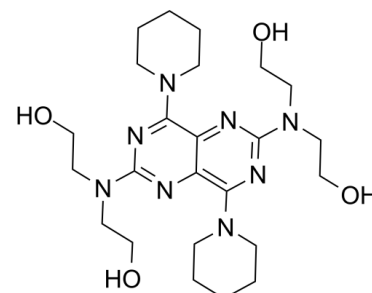


Data Sheet

Product Name:	Dipyridamole
Cat. No.:	CS-2352
CAS No.:	58-32-2
Molecular Formula:	C ₂₄ H ₄₀ N ₈ O ₄
Molecular Weight:	504.63
Target:	Phosphodiesterase (PDE)
Pathway:	Metabolic Enzyme/Protease
Solubility:	DMSO : ≥ 50 mg/mL (99.08 mM); H ₂ O : < 0.1 mg/mL (insoluble)



BIOLOGICAL ACTIVITY:

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 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.

CAIndexNames:

Ethanol, 2,2',2'',2'''-[4,8-di-1-piperidiny]pyrimido[5,4-d]pyrimidine-2,6-diyl)dinitrilo]tetrakis-

SMILES:

OCCN(CCO)C1=NC(N2CCCCC2)=C(N=C(N(CCO)CCO)N=C3N4CCCCC4)C3=N1

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

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