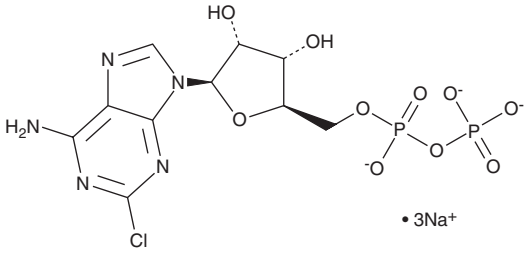
PRODUCT INFORMATION

2-Chloroadenosine-5'-O-diphosphate (sodium salt)

Item No. 38447

CAS Registry No.: 82927-78-4
Formal Name: 2-chloro-adenosine 5′-(trihydrogen diphosphate), trisodium salt
Synonym: 2-chloro ADP
MF: $C_{10}H_{11}ClN_5O_{10}P_2 \bullet 3Na$
FW: 527.6
Purity: ≥95%
Supplied as: A solution in water
Storage: -80°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Description

2-Chloroadenosine-5'-O-diphosphate is a derivative of the purine nucleotide adenosine 5'diphosphate (ADP; Item Nos. 16778 | 21121). It induces aggregation of, and inhibits the production of cyclic AMP (cAMP; Item No. 18820) induced by prostaglandin E_2 (PGE_2; Item No. 14010) in, isolated human platelet-rich plasma in a concentration-dependent manner.[1] 2-Chloroadenosine-5'-O-diphosphate induces relaxation of precontracted isolated guinea pig taenia coli strips (pD_2 = 6.74).[2] It decreases arterial blood pressure in rats.[3] 2-Chloroadenosine-5'-O-diphosphate also inhibits the ATPase activity of the heat shock protein 70 (Hsp70) family member mortalin (apparent K_i = 45.05 µM for the human enzyme).[4]

References

1. Cusack, N.J. and Hourani, S.M. Competitive inhibition by adenosine 5'-triphosphate of the actions on human platelets of 2-chloroadenosine 5'-diphosphate, 2-azidoadenosine 5'-diphosphate and 2-methylthioadenosine 5'-diphosphate. *Br. J. Pharmacol.* **77(2)**, 329-333 (1982).
2. Satchell, G. and Maguire, M.H. Inhibitory effects of adenine nucleotide analogs on the isolated guinea-pig taenia coli. *J. Pharmacol. Exp. Ther.* **195(3)**, 540-548 (1975).
3. Gough, G., Maguire, M.H., and Michal, F. 2-chloroadenosine 5'-phosphate and 2-chloroadenosine 5'-diphosphate, pharmacologically active nucleotide analogs. *J. Med. Chem.* **12(3)**, 494-498 (1969).
4. Moseng, M.A., Nix, J.C., and Page, R.C. 2- and N6-functionalized adenosine-5'-diphosphate analogs for the inhibition of mortalin. *FEBS Lett.* **593(15)**, 2030-2039 (2019).

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