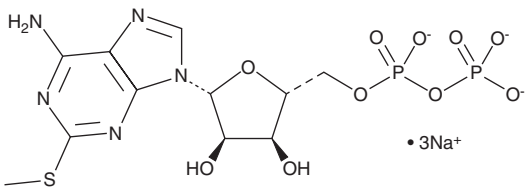
PRODUCT INFORMATION

2-Methylthioadenosine diphosphate (sodium salt)

Item No. 21230

CAS Registry No.:	475193-31-8
Formal Name:	2-(methylthio)-adenosine 5'-(trihydrogen diphosphate), trisodium salt
Synonyms:	2-MeSADP, 2-methylthio ADP
MF:	$C_{11}H_{14}N_5O_{10}P_2S \bullet 3Na$
FW:	539.2
Purity:	≥98%
UV/Vis.:	λ_{max}: 236, 275 nm
Supplied as:	A solution in water
Storage:	-20°C
Stability:	≥2 years



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

Laboratory Procedures

2-Methylthioadenosine diphosphate (2-MeSADP) (sodium salt) is supplied as a solution in water. 2-MeSADP (sodium salt) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the water solution of 2-MeSADP (sodium salt) should be diluted with the aqueous buffer of choice. The solubility of 2-MeSADP (sodium salt) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

2-MeSADP is an agonist of purinergic P2Y receptors with EC_{50}s of 5.13 and 0.89 nM for human recombinant $P2Y_1$ and $P2Y_{12}$ receptors, respectively.[1] It also acts as an agonist at rat $P2Y_1$ and $P2Y_{12}$ and mouse $P2Y_{13}$ receptors (EC_{50}s = 0.58, 0.89, and 6.2 nM, respectively).[1,2] It induces platelet aggregation and inhibits cyclic AMP accumulation in platelet-rich plasma stimulated by prostaglandin E_1 (PGE_1; Item No. 13010) more potently than ADP (Item Nos. 21121 | 16778).[3]

References

1. Sak, K. and Webb, T.E. A retrospective of recombinant P2Y receptor subtypes and their pharmacology. *Arch. Biochem. Biophys.* **397(1)**, 131-136 (2002).
2. Zhang, F.L., Luo, L., Gustafson, E., *et al.* $P2Y_{13}$: Identification and characterization of a novel $G_{\alpha i}$-coupled ADP receptor from human and mouse. *J. Pharmacol. Exp. Ther.* **301(2)**, 705-713 (2002).
3. Macfarlane, D.E., Srovastava, P.C., and Mills, D.C. 2-Methylthioadenosine[β-^{32}P]diphosphate. An agonist and radioligand for the receptor that inhibits the accumulation of cyclic AMP in intact blood platelets. *J. Clin. Invest.* **71(3)**, 420-428 (1983).

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