

PRODUCT INFORMATION



MRS2179 (ammonium salt hydrate)

Item No. 10011450

Formal Name: 2'-deoxy-N-methyl-3'-adenylic acid, 5'-(dihydrogen phosphate), ammonium salt, hydrate

MF: C₁₁H₁₇N₅O₉P₂ • XNH₃ [XH₂O]

FW: 425.2

Purity: ≥98%

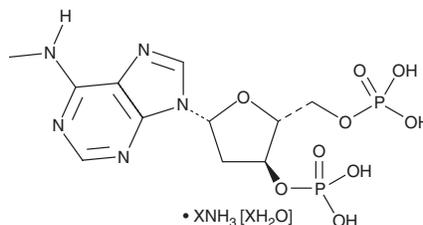
Supplied as: A solid

Storage: -20°C

Stability: ≥4 years

Special Conditions: Store in desiccating conditions

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



Laboratory Procedures

MRS2179 (ammonium salt hydrate) is supplied as a solid. MRS2179 (ammonium salt hydrate) is soluble in water at a concentration of up to approximately 100 mM. We do not recommend storing the aqueous solution for more than one day.

Description

MRS2179 is a competitive purinergic P2Y₁ receptor antagonist ($K_b = 102$ nM).¹ It is selective for P2Y₁ over P2Y₂, P2Y₄, P2Y₆, P2Y₁₂, and P2Y₁₃, as well as P2X₁₋₄ receptors at 10 μM.^{2,3} MRS2179 reduces phospholipase C (PLC) activity induced by the P2Y receptor agonist 2-methylthioadenosine diphosphate (2-MeSADP; Item No. 21230) with an IC₅₀ value of 331 nM in turkey erythrocyte membranes that endogenously express high levels of the P2Y₁ receptor.¹ It inhibits platelet shape change and aggregation induced by ADP (Item No. 21121) in washed isolated human platelets when used at a concentration of 10 μM.⁴ MRS2179 (50 mg/kg, i.v.) prolongs the length of tail bleeding time in mice, as well as decreases platelet thrombus formation in a mouse model of iron chloride-induced arterial thrombosis.^{4,5}

References

1. Nandanan, E., Camaioni, E., Jang, S.-Y., *et al.* Structure-activity relationships of bisphosphate nucleotide derivatives as P2Y₁ receptor antagonists and partial agonists. *J. Med. Chem.* **42(9)**, 1625-1638 (1999).
2. von Kügelgen, I. Pharmacological profiles of cloned mammalian P2Y-receptor subtypes. *Pharmacol. Ther.* **110(3)**, 415-32 (2006).
3. Brown, S.G., King, B.F., Kim, Y.-C., *et al.* Activity of novel adenine nucleotide derivatives as agonists and antagonists at recombinant rat P2X receptors. *Drug Dev. Res.* **49(4)**, 253-259 (2000).
4. Tovar, C., Higgins, B., Deo, D.D., *et al.* Small-molecule inducer of cancer cell polyploidy promotes apoptosis or senescence: Implications for therapy. *Cell Cycle* **9(16)**, 3364-3375 (2010).
5. Lenain, N., Freund, M., Léon, C., *et al.* Inhibition of localized thrombosis in P2Y₁-deficient mice and rodents treated with MRS2179, a P2Y₁ receptor antagonist. *J. Thromb. Haemost.* **1(6)**, 1144-1149 (2003).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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