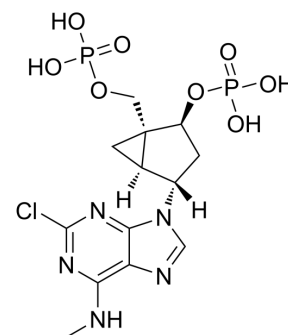


## MRS2279

<b>Cat. No.:</b>	HY-108657
<b>CAS No.:</b>	367909-40-8
<b>Molecular Formula:</b>	C <sub>13</sub> H <sub>18</sub> ClN <sub>5</sub> O <sub>8</sub> P <sub>2</sub>
<b>Molecular Weight:</b>	469.71
<b>Target:</b>	P2Y Receptor
<b>Pathway:</b>	GPCR/G Protein
<b>Storage:</b>	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

<b>Description</b>	MRS2279 is a selective and high affinity P2Y1 receptor antagonist, with a K <sub>i</sub> of 2.5 nM and an IC <sub>50</sub> of 51.6 nM. MRS2279 competitively inhibits ADP-promoted platelet aggregation with an apparent affinity (pK <sub>B</sub> =8.05) <sup>[1][2][3]</sup> .
<b>IC<sub>50</sub> &amp; Target</b>	P2Y1 Receptor 51.6 nM (IC <sub>50</sub> )
<b>In Vitro</b>	<p>MRS2279 antagonizes 2-MeSADP-stimulated inositol phosphate formation in turkey erythrocyte membranes with a pK<sub>B</sub> value of 7.75<sup>[2]</sup>.</p> <p>MRS2279 shows high affinity competitive antagonism to human P2Y1 receptor with a pK<sub>B</sub> value of 8.10 in 1321N1 human astrocytoma cells<sup>[2]</sup>.</p> <p>MRS2279 shows specific effect for the P2Y1 receptor, but shows no effect on activation of the human P2Y2, P2Y4, P2Y6, or P2Y11 receptors by their cognate agonists<sup>[2]</sup>.</p> <p>MRS2279 shows no ability to block the capacity of ADP to act through the Gi/adenylyl cyclase linked P2Y receptor of platelets to inhibit cyclic AMP accumulation<sup>[2]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>
<b>In Vivo</b>	<p>MRS2279 (2 μL, 1 nM; intracerebroventricular injection; 30 min prior to mechanical ventilation) reduces mouse brain injury induced by mechanical ventilation in high-pressure ventilation mice<sup>[3]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>

### CUSTOMER VALIDATION

- Bioengineered. 2022 Feb;13(2):2346-2359.

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### REFERENCES

[1]. Wei W, et al. Mechanical ventilation induces lung and brain injury through ATP production, P2Y1 receptor activation and dopamine release. Bioengineered. 2022 Feb;13(2):2346-2359.

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[2]. Nandan E, et al. Synthesis, biological activity, and molecular modeling of ribose-modified deoxyadenosine bisphosphate analogues as P2Y(1) receptor ligands. J Med Chem. 2000;43(5):829-842.

[3]. Boyer JL, et al, Ravi RG, Jacobson KA, Harden TK. 2-Chloro N(6)-methyl-(N)-methanocarba-2'-deoxyadenosine-3',5'-bisphosphate is a selective high affinity P2Y(1) receptor antagonist. Br J Pharmacol. 2002;135(8):2004-2010.

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

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