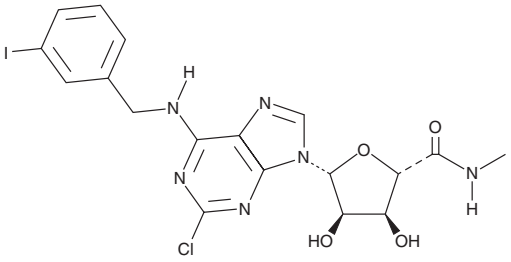
PRODUCT INFORMATION

2-Cl-IB-MECA

Item No. 27336

CAS Registry No.:	163042-96-4
Formal Name:	1-[2-chloro-6-[[(3-iodophenyl)methyl]amino]-9H-purin-9-yl]-1-deoxy-N-methyl-β-D-ribofuranuronamide
Synonyms:	2-Chloro-IB-MECA, CF 102, Namodenoson
MF:	$C_{18}H_{18}ClIN_6O_4$
FW:	544.7
Purity:	≥98%
UV/Vis.:	λ_{max}: 273 nm
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years



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

Laboratory Procedures

2-Cl-IB-MECA is supplied as a solid. A stock solution may be made by dissolving the 2-Cl-IB-MECA in the solvent of choice, which should be purged with an inert gas. 2-Cl-IB-MECA is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of 2-Cl-IB-MECA in these solvents is approximately 15 and 10 mg/ml, respectively.

2-Cl-IB-MECA is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 2-Cl-IB-MECA should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. 2-Cl-IB-MECA has a solubility of approximately 0.3 mg/ml in a 1:2 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

2-Cl-IB-MECA is an adenosine A_3 receptor agonist.[1] It binds selectively to adenosine A_3 receptors (K_i = 0.33 nM) over A_1 and A_{2A} receptors (K_is = 820 and 470 nM, respectively) and inhibits adenylate cyclase activity with an IC_{50} value of 66.8 nM in CHO cell membranes expressing rat A_3 receptors. 2-Cl-IB-MECA (10 and 100 nM) inhibits proliferation of B16/F10 melanoma cells and increases proliferation of murine bone marrow cells *in vitro*, effects that can be blocked by the A_3 receptor antagonist MRS1523 (Item No. 17128).[2] It induces accumulation of cells in the G_0/G_1 phase of the cell cycle and induces apoptosis when used at a concentration of 100 nM. 2-Cl-IB-MECA (6 µg/mg) prevents the development of lung metastatic foci in a B16/F10 mouse model of lung metastasis and reverses decreases in the number of white blood cells and neutrophils induced by cyclophosphamide (Item No. 13849).

References

1. Kim, H.O., Ji, X.d., Siddiqi, S.M., *et al.* 2-Substitution of N^6-benzyladenosine-5'-uronamides enhances selectivity for A_3 adenosine receptors. *J. Med. Chem.* **37(21)**, 3614-3621 (1994).
2. Fishman, P., Bar-Yehuda, S., Barer, F., *et al.* The A3 adenosine receptor as a new target for cancer therapy and chemoprotection. *Exp. Cell Res.* **269(2),** 230-236 (2001).

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
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