



# SZABO SCANDIC

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## Produktinformation



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# 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<sub>18</sub>H<sub>18</sub>ClIN<sub>6</sub>O<sub>4</sub>

**FW:** 544.7

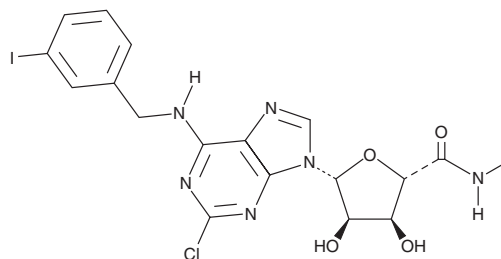
**Purity:** ≥98%

**UV/Vis.:** λ<sub>max</sub>: 273 nm

**Supplied as:** A solid

**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-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<sub>3</sub> receptor agonist.<sup>1</sup> It binds selectively to adenosine A<sub>3</sub> receptors (K<sub>i</sub> = 0.33 nM) over A<sub>1</sub> and A<sub>2A</sub> receptors (K<sub>i</sub>s = 820 and 470 nM, respectively) and inhibits adenylate cyclase activity with an IC<sub>50</sub> value of 66.8 nM in CHO cell membranes expressing rat A<sub>3</sub> 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<sub>3</sub> receptor antagonist MRS1523 (Item No. 17128).<sup>2</sup> It induces accumulation of cells in the G<sub>0</sub>/G<sub>1</sub> 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<sup>6</sup>-benzyladenosine-5'-uronamides enhances selectivity for A<sub>3</sub> 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.

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