

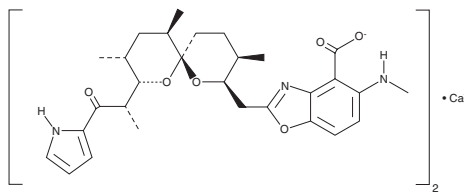
PRODUCT INFORMATION



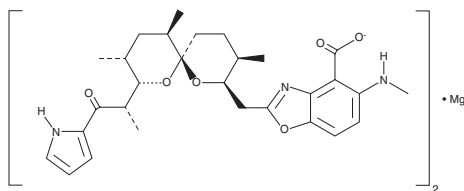
A23187 (calcium magnesium salt)

Item No. 22030

Formal Name: 5-(methylamino)-2-[[[(2R,3R,6S,8S,9R,11R)-3,9,11-trimethyl-8-[(1S)-1-methyl-2-oxo-2-(1H-pyrrol-2-yl)ethyl]-1,7-dioxaspiro[5.5]undec-2-yl)methyl]-4-benzoxazolecarboxylic acid, calcium salt (2:1)
5-(methylamino)-2-[[[(2R,3R,6S,8S,9R,11R)-3,9,11-trimethyl-8-[(1S)-1-methyl-2-oxo-2-(1H-pyrrol-2-yl)ethyl]-1,7-dioxaspiro[5.5]undec-2-yl)methyl]-4-benzoxazolecarboxylic acid, magnesium salt (2:1)



Synonym: Calcimycin
MF: [C₂₉H₃₆N₃O₆]₂ Ca • [C₂₉H₃₆N₃O₆]₂ Mg
FW: 523.6
Purity: ≥98%
UV/Vis.: λ_{max}: 230, 303, 371 nm
Supplied as: A crystalline 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

A23187 (calcium magnesium salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the A23187 (calcium magnesium salt) in the solvent of choice, which should be purged with an inert gas. A23187 (calcium magnesium salt) is soluble in organic solvents such as ethanol and dimethyl formamide. The solubility of A23187 (calcium magnesium salt) in these solvents is approximately 3 mg/ml.

A23187 (calcium magnesium salt) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, A23187 (calcium magnesium salt) should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. A23187 (calcium magnesium salt) has a solubility of approximately 0.5 mg/ml in a 1:1 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

A23187 is a divalent cation ionophore. While more selective for Mn²⁺, it is commonly used to facilitate the movement of Ca²⁺ into cells, triggering the activation of intracellular calcium-dependent pathways.¹ A23187 is also used to produce apoptosis through calcium overload, as occurs during hypoxic or oxidative stress.^{2,3}

References

1. Sullivan, T.J. and Parker, C.W. Pharmacologic modulation of inflammatory mediator release by rat mast cells. *Am. J. Pathol.* **85(2)**, 437-464 (1976).
2. Maecker, H.T., Hedjbeli, S., Alzona, M., *et al.* Comparison of apoptosis signaling through T cell receptor, Fas, and calcium ionophore. *Exp. Cell Res.* **222(1)**, 95-102 (1996).
3. Cho, S.Y., Lee, J.H., Bae, H.D., *et al.* Transglutaminase 2 inhibits apoptosis induced by calcium-overload through down-regulation of Bax. *Exp. Mol. Med.* **42(9)**, 639-650 (2010).

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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