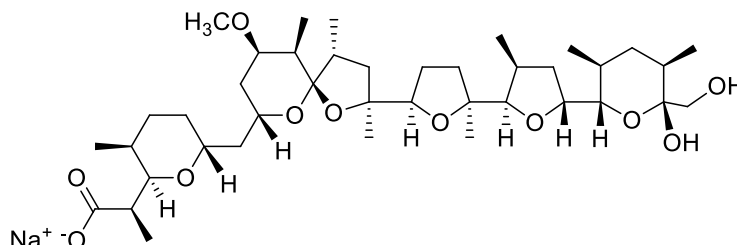


Nigericin sodium

Code No.: **BIA-N1220**

Pack sizes: **5 mg, 25 mg**



Synonyms : Polyetherin A, Azalomycin M, Helixin C, K 178, X 464, Pandavir

Specifications

CAS #	: 28643-80-3
Molecular Formula	: C₄₀H₆₇NaO₁₁
Molecular Weight	: 747
Source	: <i>Streptomyces hygroscopicus</i>
Appearance	: White powder
Purity	: >95% by HPLC
Long Term Storage	: -20°C
Solubility	: Soluble in ethanol, methanol, DMF or DMSO. Limited water solubility.

Application Notes

Nigericin sodium is a salt of the atypical polyether antibiotic, nigericin. Since nigericin is an ionophore, its very high affinity for monovalent cations such as Na⁺ and K⁺ means that formation of a salt is a facile process occurring during purification under any but highly acidic conditions. Typically, the salts of polyether ionophores like the free acid, are readily extracted into organic solvents. The sodium ion is stabilised within a polar pocket of the structure, effectively making the salt and free acid different chemical moieties with the potential for differing pharmacology, a fact not readily appreciated in the literature.

References

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3. Nigericin-induced Na⁺/H⁺ and K⁺/H⁺ exchange in synaptosomes: effect on [3H]GABA release. Rodriguez R. & Sitges M., *Neurochem. Res.* 1996, 21, 889.
4. Nigericin inhibits accumulation of the steroidogenic acute regulatory protein but not steroidogenesis. King S.R. et al., *Mol. Cell. Endocrinol.* 2000, 166, 147.
5. Nigericin inhibits insulin-stimulated glucose transport in 3T3-L1 adipocytes. Chu C.Y. et al., *J. Cell. Biochem.* 2002, 85, 83.
6. Inhibitory effects of polyethers on human immunodeficiency virus replication. Nakamura M., *Antimicrob. Ag. Chemother.* 1992, 36, 492.