NKH477 (hydrochloride)

CAS Registry No.: 138605-00-2
Formal Name: (3R,4aR,5S,6S,10S,10aR,10bS)-5-(acetyloxy)-3-ethenylodecahydro-10,10b-dihydroxy-3,4a,7,7,10a-pentamethyl-1-β-alanine,N,N-dimethyl-oxo-1H-naphtho[2,1-b]pyran-6-yl ester, monohydrochloride
Synonyms: Adehl, Colforsin Dapropate, Colforsin Daropate
MF: C₂₇H₄₃NO₈ • HCl
FW: 546.1
Purity: ≥95%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid

Laboratory Procedures

For long term storage, we suggest that NKH477 (hydrochloride) be stored as supplied at -20°C. It should be stable for at least two years. NKH477 (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the NKH477 (hydrochloride) in the solvent of choice. NKH477 (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of NKH477 (hydrochloride) in ethanol is approximately 2.5 mg/ml and approximately 20 mg/ml in DMSO and DMF.

NKH477 (hydrochloride) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, NKH477 (hydrochloride) should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. NKH477 (hydrochloride) has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Forskolin (Item No. 11018) is a potent activator of adenyl cyclase, but it is sparingly soluble in aqueous solutions. NKH477 is a water-soluble analog of forskolin which has both inotropic and vasodilator effects when administered intravenously. Like forskolin, NKH477 activates adenyl cyclases without altering the activity of phosphodiesterases or sodium/potassium ATPases. This compound stimulates cardiac (type V) adenyl cyclase more potently than other isoforms. NKH477 relaxes guinea pig tracheal smooth muscle precontracted with histamine with an EC₅₀ value of 32.6 nM.

References

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SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent by our institution.

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