CERTIFICATE OF ANALYSIS

NEBULARINE

9-(β-D-ribofuranosyl)-purine

$C_{10}H_{12}N_4O_4$, FW = 252.23

OLCHEMIM CODE: 001 792n
OLCHEMIM BATCH: 792-B
MANUFACTURING DATE: January 2026
EXPIRATION DATE: January 2035
CAS: 550-33-4
BATCH SIZE: 420 mg

SYNTHESIS

By 2 step reaction from 6-chloro-9-(β-D-ribofuranosyl)purine, which is reacted with hydrazin hydrate to 6-hydrazino-9-(β-D-ribofuranosyl)purine, and subsequently decomposed to nebularine in methanol at presence of silver carbonate as catalyst. Re-crystalized from ethanol.

Appearance: white crystals, soluble in water, methanol, DMF, DMSO.

ANALYSIS

mp 176 -178 ^{o}C (Kofler block)

TLC (silica-chloroform/MeOH/conc. NH_4OH, 4/1/0.05, v/v/v), Rf 0.65. Purity 97+% at 25 μg and 50 μg loading. No contaminants detected.
^{1}H, ^{13}C NMR: in accordance with published data.
Elemental analysis: in a good accordance with calcd. data
MASS SPETROMETRY: Matches the reference spectrum $[M+H]^{+}$= 253.28 amu, ZMD 2000 (Waters) single quadrupole electrospray MS.
HPLC: Samples were dissolved in mobile phase (initial conditions) and separated on RP-column (150 mm × 4.6 mm, 5μm) (Microsorb C18; Varian). The elution was performed with a methanolic gradient. The flow rate was 0.6 ml/min. The UV absorbance was scanned between 240 – 300 nm. Rt = 3.81 min. Purity 98+%.

STORAGE & STABILITY

Store over silica gel in tightly sealed container at room temperature in darkness. No detectable decomposition after 12 months storage under these conditions

FOR LABORATORY USE BY EXPERIENCED PERSONNEL ONLY; NOT FOR DRUG, HOUSEHOLD OR OTHER USES

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