CERTIFICATE OF ANALYSIS

ZEATIN-O-GLUCOSIDE RIBOSIDE (ZROG)

(O-β-D-GLUCOPYRANOSYL-9-β-D-RIBOFURANOSYLZEATIN, *cis*-isomer)

$C_{21}H_{31}N_5O_{10}$, FW = 513.51

OLCHEMIM CODE: 001 325n
OLCHEMIM BATCH: cZROG-C
MANUFACTURING DATE: October 2025
EXPIRATION DATE: October 2033
CAS: 125225-72-1
BATCH SIZE: 140 mg

SYNTHESIS: Condensation of 6-chloropurine-9-β-D-riboside and *cis*-4-amino-2-methylbut-2-enyl-β-D-glucopyranoside in the presence of triethylamine. Purified by reverse and normal phase chromatography. Re-crystallised from methanol/acetonitrile. A colourless, hygroscopic solid, freely soluble in methanol.

ANALYSIS

MELTING POINT: Softens at 125°C, then melts without decomp. at 145-150°C.

UV: Determined after drying to constant weight over phosphorus pentoxide in vacuo.

EtOH	λmax 269 nm (19,000)
EtOH/0.1 M HCl	λmax 266 nm (19,240)
EtOH/0.1 M ammonia	λmax 269 nm (17,700)
pH 7.2 (50 mM PBS, 0.15 NaCl)	λmax 269.3 nm (17,900)
pH 2 (≅0.1 M HCl)	λmax 276.5 nm (17,800)
pH 11 (≅0.1 M NaOH)	λmax 275.8 nm (17,800)
50% EtOH	λmax 269.4 nm (18,200)

TLC (silica-nBuOH/AcOH/water, 12/3/5, v/v), Rf 0.38. Purity 95+% at 25 µg loading.

TLC (silica-nBuOH/14 M ammonia/water, 6/1/2, upper phase), Rf 0.18. Purity 95+% at 25 µg loading.

HPLC (15 x 0.45 cm ODS, 5 to 20% acetonitrile over 30 min, 2 ml/min, scan at 270 nm), Rt 15.4 min. Purity 95+%.

Enzymatic hydrolysis: ZROG (1 µmole) incubated with β-glucosidase (30 mM Na-acetate buffer, pH 5.3) for 3 h at 35oC shows >98% conversion into a compound which co-chromatographs in a 1:1 mix with cis-zeatin riboside. Digestion with α-glucosidase (50 mM Na phosphate buffer, pH 6.7) under the same conditions showed <1% production of cis-zeatin riboside.

Storage and stability: ACID LABILE! HYGROSCOPIC! Store over silica gel in tightly sealed container at –18°C.

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

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