

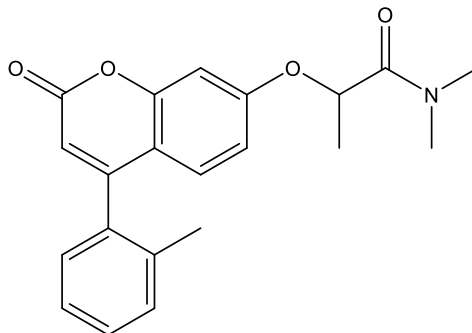
Catalog # 10-3918

IMT1

CAS# 2304621-31-4

N,N-Dimethyl-2-[4-(2-methylphenyl)-2-oxochromen-7-yl]oxypropanamide; N,N-Dimethyl-2-((2-oxo-4-(o-tolyl)-2H-chromen-7-yl)oxy)propanamide

Lot # FBA9011



IMT1 is a specific inhibitor of mitochondrial DNA (mtDNA) transcription. It targets an allosteric binding site on human mitochondrial RNA polymerase leading to impairment of biogenesis of the oxidative phosphorylation (OXPHOS) system.¹ IMT1 treatment of 89 cancer cell lines lead to a strong decrease in cell viability in one third of them without affecting normal cells. It inhibited proliferation and migration in squamous cell² and endometrial carcinoma cells³.

- 1) Bonekamp, *et al.* (2020), *Small-molecule inhibitors of human mitochondrial DNA transcription*; *Nature*, **588** 712
- 2) Wang, *et al.* (2022), *The mitochondrial RNA polymerase POLRMT promotes skin squamous cell carcinoma growth*; *Cell Death Discov.*, **8** 347
- 3) Li, *et al.* (2023), *A first-in-class POLRMT specific inhibitor IMT1 suppresses endometrial carcinoma cell growth*; *Cell Death Dis.*, **14** 152

PHYSICAL DATA

Molecular Weight: 351.40
Molecular Formula: C₂₁H₂₁NO₄
Purity: 98% by TLC
NMR: Conforms
Solubility: DMSO (at least 50 mg/ml)
Physical Appearance: White solid
Storage and Stability: Store as supplied desiccated at -20°C for up to 2 years from the date of purchase.
Hygroscopic solid. Solutions in DMSO may be stored at -20°C for up to 3 months.

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