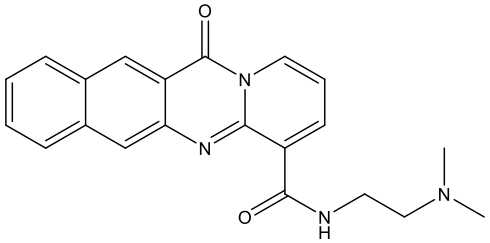
Catalog # 10-5688

BMH-21

CAS# 896705-16-1

N-[2-(Dimethylamino)ethyl]-12-oxo-12H-benzo[g]pyrido[2,1-b]quinazoline-4-carboxamide

Lot # X108418



BMH-21 is a planar heterocyclic DNA intercalator that inhibits RNA polymerase I (Pol I), IC_{50} = 0.6 µM in U2OS cells, but not Pols II or III, blocking transcription elongation without inducing the DNA damage response.[1-3] Inhibition disengages Pol I from chromatin, resulting in proteasome-dependent destruction of Pol I subunit RPA194.[4] At nanomolar concentrations it also activates p53 in A375 cells.[5]

1) Colis *et al*. (2014), *DNA intercalator BMH-21 inhibits RNA polymerase I independent DNA damage response*; Oncotarget, **5** 4361
2) Jacobs *et al*. (2022), *RNA Polymerase I is Uniquely Vulnerable to the Small-Molecule Inhibitor BMH-21*; Cancers (Basel), **14** 5544
3) Jacobs *et al.* (2022), *The small-molecule BMH-21 directly inhibits transcription elongation and DNA occupancy of RNA polymerase I in vivo and in vitro*; J. Biol. Chem, **298** 101450
4) Wei *et al.* (2018), *Small-molecule targeting of RNA Polymerase I Activates a Conserved Transcription Elongation Checkpoint*; Cell Rep. **23** 404
5) Peltonen *et al.* (2010), *Identification of novel p53 pathway activating small-molecule compounds reveals unexpected similarities with known therapeutic reagents*; PLoS One **5** e12996

PHYSICAL DATA

Molecular Weight:	360.42
Molecular Formula:	$C_{21}H_{20}N_4O_2$
Purity:	>98% by HPLC
	NMR: (Conforms)
Solubility:	DMSO (13 mg/ml with warming)
Physical Description:	Orange solid
Storage and Stability:	Store as supplied desiccated at -20°C for up to 2 years from the date of purchase.
	Solutions in DMSO may be stored at -20°C for up to 3 months.

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