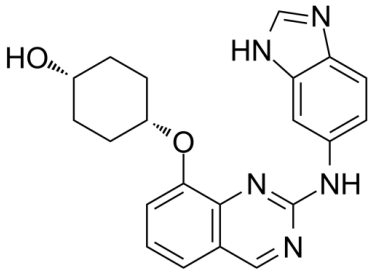
Data Sheet

Product Name:	NCB-0846
Cat. No.:	CS-6441
CAS No.:	1792999-26-8
Molecular Formula:	C21H21N5O2
Molecular Weight:	375.42
Target:	MAP4K; Wnt
Pathway:	MAPK/ERK Pathway; Stem Cell/Wnt
Solubility:	DMSO : ≥ 30 mg/mL (79.91 mM)



BIOLOGICAL ACTIVITY:

NCB-0846 is an orally available **TNIK** inhibitor with an **IC_{50}** of 21 nM. IC50 & Target: IC50: 21 nM (TNIK)[1] **In Vitro:** NCB-0846 has anti-Wnt activity. NCB-0846 binds to TNIK in an inactive conformation, and this binding mode seems to be essential for Wnt inhibition. NCB-0846 shows inhibitory activity against TNIK with an IC_{50} of 21 nM. NCB-0846 also inhibits FLT3, JAK3, PDGFRα, TRKA, CDK2/CycA2, and HGK. NCB-0846 induces faster migration of TCF4 phosphorylated by TNIK within a concentration range of 0.1-0.3 μM and completely inhibits the phosphorylation of TCF4 at a concentration of 3 μM. NCB-0846 inhibits HCT116 cell growth and shows much higher (-20-fold) inhibitory activity against colony formation by the same cells in soft agar[1]. **In Vivo:** NCB-0846 suppresses the growth of tumors established by inoculating HCT116 cells into immunodeficient mice. The expression of Wnt-target genes (AXIN2, MYC and CCND1) in xenografts is reduced following the administration of NCB-0846. NCB-0846 induces an increase in the sub-G1 cell population. Cleavage of poly (ADP-ribose) polymerase 1 indicates the induction of apoptosis[1].

PROTOCOL (Extracted from published papers and Only for reference)

Animal Administration: [1]Mice: NCB-0846 is suspended in DMSO/polyethylene glycol#400/30% 2-hydroxypropyl-β-cyclodextrin solution (10:45:45v/v). Five million HCT116 cells suspended in medium containing 25% Matrigel are inoculated into the subcutaneous tissues of 9-week-old female BALB/c nude mice. Mice are randomized according to tumour volume (9 mice per group). NCB-0846 was administered daily by oral gavage at 0 (vehicle alone), 40 or 80 mg/kg (body weight) BID (bis in die) for 14 days[1].

References:

[1]. Masuda M, et al. TNIK inhibition abrogates colorectal cancer stemness. Nat Commun. 2016 Aug 26;7:12586.

CAIndexNames:

Cyclohexanol, 4-[[2-(1H-benzimidazol-6-ylamino)-8-quinazolinyl]oxy]-, cis-

SMILES:

O[C@@H](CC1)CC[C@@H]1OC2=CC=CC(C=N3)=C2N=C3NC4=CC=C(N=CN5)C5=C4

Caution: Product has not been fully validated for medical applications. For research use only.

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