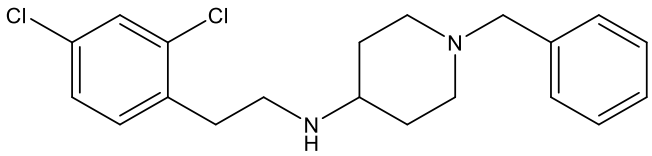
Catalog # 10-5733

M22

CAS# 864420-54-2

1-Benzyl-N-(2,4-dichlorophenethyl) piperidin-4-amine; or N-[2-(2,4-dichlorophenyl)ethyl]-1-(phenylmethyl)-4-piperidinamine; NAE-IN-M22

Lot # S107101



Protein neddylation is a post-translational modification which transfers the ubiquitin-like protein NEDD8 to a lysine residue of the target substrate through a three-step enzymatic cascade and has been considered as a viable target for the development of new therapeutics for cancer.[1] M22 is an inhibitor of NEDD8 activating enzyme (NAE) which was discovered by virtual screening of a small molecule library (50,000 compounds) against the active site of NAE.[2] M22 is selective and reversible and inhibits NEDDylation of ubiquitin-conjugating enzyme 12 (UBC12) in a cell-free assay employing recombinant human NAE. It selectively inhibits NEDDylation over SUMOylation and ubiquitination in A549 cells and inhibits their growth (GI_{50} = 5.5 µM). It has been shown to inhibit tumor growth in a mouse xenograft model (at 60 mg/kg).[2]

1) Zhong *et al*. (2012), *Discovery of a natural product inhibitor targeting protein neddylation by structure-based virtual screening*; Biochimie, **94** 2457
2) Lu *et al*. (2016), *Discovery of a novel NEDD8 activating enzyme inhibitor with piperidin-4-amine scaffold by structure-based virtual screening*; ACS Chem. Biol., **11** 1901

PHYSICAL DATA

Molecular Weight:	363.33
Molecular Formula:	$C_{20}H_{24}Cl_2N_2$
Purity:	>98% by TLC
	NMR: (Conforms)
Solubility:	DMSO (40 mg/ml)
Physical Description:	Off-white 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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