NEUROMICS

MLN4924 Data Sheet

Catalog Number:	MC11032	**Product Type:**	Small Molecule
Bio-Activity:	Nedd8 activating enzyme inhibitor	**CAS #:**	905579-51-3
Research Categories:	CRISPR, cell death, ceuroscience, ubiquitin/proteasome, cancer, inflammation, ischemia, neurodegeneration	**Chemical Name:**	((1S,2S,4R)-4-(4-(((S)-2,3-dihydro-1H-inden-1-yl)amino)-7H-pyrrolo[2,3-d]pyrimidin-7-yl)-2-hydroxycyclopentyl)methyl sulfamate
Solubility:	Soluble in DMSO (up to 10 mg/ml).	**Molecular Formula:**	C21H25N5O4S
Purity:	> 98%	**Molecular Weight:**	443.53
Format:	Lyophilized	**Ship Temp:**	Ambient
Storage:	-20°C		

Application Notes

Description/Data:
Potent and selective NEDD8-activating enzyme (NAE) inhibitor [1]. It disrupts cullin-RING ligase-mediated protein turnover leading to apoptosis in human tumor cells. Suppresses the growth of human tumor xenografts in mice [2]. Upregulates PD-L1 expression and enhances the efficacy of immune checkpoint blockade in glioblastoma [3]. Modulates tumor microenvironment [4]. Blocks the neddylation of the DNA endonuclease CtIP, which promotes HDR in Cas9- and Cpf1-mediated gene editing. Part of the CRISPY mix for increasing precise gene editing [5]. Cell permeable.

References:

1) Soucy, et al. (2009), An inhibitor of NEDD8-activating enzyme as a new approach to treat cancer. Nature 458 732

2) Milhollen, et al. (2010) MLN4924, a NEDD8-activating enzyme inhibitor, is active in diffuse large B-cell lymphoma models: rationale for treatment of NF-(kappa)B-dependent lymphoma. Blood, 116 1515

3) Zhou et al. (2019) Neddylation inhibition upregulates PD-L1 expression and enhances the efficacy of immune checkpoint blockade in glioblastoma; Int. J. Cancer, 145 763

4) Zhou et al. (2019) Neddylation: a novel modulator of the tumor microenvironment; Mol. Cancer 18 77

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5) Riesenberg and Maricic (2018) Targeting repair pathways with small molecules increases precise genome editing in pluripotent stem cells; Nat. Commun. 9 2164

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