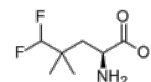


Product Name : NV-5138
Cat. No. : PC-38176
CAS No. : 2095886-80-7
Molecular Formula : C₇H₁₃F₂NO₂
Molecular Weight : 181.183
Target : mTOR
Solubility : 10 mM in DMSO



Biological Activity

NV-5138 (NV5138) is the first selective, orally bioavailable brain **mTORC1 activator**, binds to **Sestrin2** (K_d=1.5 μM) and activates mTORC1 both in vitro and in vivo.

NV-5138 activates mTORC1 by modulating the interaction between Sestrin2 and GATOR2 in cells.

NV-5138 is a selective small molecule that binds to Sestrin1/2 and differentiates from the natural ligand leucine by the lack of metabolism via the BCAT pathway and utilization in protein synthesis.

NV-5138 transiently activates mTORC1 in the brain in vivo.

A single dose of NV-5138 produced rapid and long-lasting antidepressant effects, and rapidly reversed anhedonia caused by chronic stress exposure.

NV-5138 also rapidly increased synapse number and function in the mPFC, and reversed the synaptic deficits caused by chronic stress in vivo.

References

Sengupta S, et al. *Sci Rep.* 2019 Mar 11;9(1):4107.

Kato T, et al. *J Clin Invest.* 2019 Apr 16;129(6):2542-2554.

Caution: Product has not been fully validated for medical applications. Lab Use Only!

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