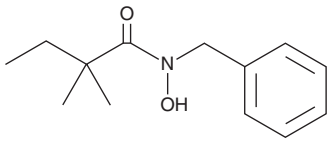
PRODUCT INFORMATION

RIPA-56

Item No. 33431

CAS Registry No.:	1956370-21-0
Formal Name:	N-hydroxy-2,2-dimethyl-N-(phenylmethyl)-butanamide
MF:	$C_{13}H_{19}NO_2$
FW:	221.3
Purity:	≥98%
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

RIPA-56 is supplied as a crystalline solid. A stock solution may be made by dissolving the RIPA-56 in the solvent of choice, which should be purged with an inert gas. RIPA-56 is soluble in organic solvents such as ethanol and DMSO.

Description

RIPA-56 is an inhibitor of receptor interacting serine/threonine kinase 1 (RIPK1; IC_{50} = 13 nM).[1] It is selective for RIPK1 over RIPK3 at 10 µM, as well as over a panel of additional kinases at 2 µM. RIPA-56 inhibits Z-VAD-FMK-induced necrosis in HT-29 cells (EC_{50} = 28 nM). *In vivo*, RIPA-56 (6 mg/kg) reduces TNF-α-induced lethality and protects against TNF-α-induced organ damage in a mouse model of systemic inflammatory response syndrome (SIRS). It reduces spinal cord demyelination and breakdown of the blood-brain barrier (BBB) in a mouse model of experimental autoimmune encephalomyelitis (EAE).[2] RIPA-56 (300 mg/kg) reduces hepatic inflammatory cell infiltration and fibrosis, as well as body weight gain and total fat mass, in a mouse model of high-fat diet-induced non-alcoholic steatohepatitis (NASH).[3]

References

1. Ren, Y., Su, Y., Sun, L., *et al.* Discovery of a highly potent, selective, and metabolically stable inhibitor of receptor-interacting protein 1 (RIP1) for the treatment of systemic inflammatory response syndrome. *J. Med. Chem.* **60(3)**, 972-986 (2017).
2. Zhang, S., Su, Y., Ying, Z., *et al.* RIP1 kinase inhibitor halts the progression of an immune-induced demyelination disease at the stage of monocyte elevation. *Proc. Natl. Acad. Sci. USA* **116(12)**, 5675-5680 (2019).
3. Majdi, A., Aoudjehane, L., Ratziu, V., *et al.* Inhibition of receptor-interacting protein kinase 1 improves experimental non-alcoholic fatty liver disease. *J. Hepatol.* **72(4)**, 627-635 (2020).

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