



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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### Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

[mail@szabo-scandic.com](mailto:mail@szabo-scandic.com)

[www.szabo-scandic.com](http://www.szabo-scandic.com)

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

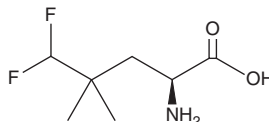
# PRODUCT INFORMATION



**NV-5138**

Item No. 35482

**CAS Registry No.:** 2095886-80-7  
**Formal Name:** 2S-amino-5,5-difluoro-4,4-dimethyl-pentanoic acid  
**MF:** C<sub>7</sub>H<sub>13</sub>F<sub>2</sub>NO<sub>2</sub>  
**FW:** 181.2  
**Purity:** ≥95%  
**Supplied as:** A 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

NV-5138 is supplied as a solid. A stock solution may be made by dissolving the NV-5138 in the solvent of choice, which should be purged with an inert gas. NV-5138 is soluble in the organic solvent DMSO at a concentration of approximately 10 mM.

## Description

NV-5138 is a sestrin modulator and mammalian target of rapamycin protein complex 1 (mTORC1) activator.<sup>1</sup> It binds to sestrin 2 ( $K_d = 1.49 \mu\text{M}$ ) and induces dissociation of sestrin 2 from the multimeric mTORC1 inhibitory complex GATOR2 and mTORC1 activation when used at concentrations ranging from 30 to 100  $\mu\text{M}$ . NV-5138 (40, 80, or 160 mg/kg) reduces immobility time in the forced swim test and latency to feed in the novelty-suppressed feeding test, indicating antidepressant- and anxiolytic-like activity, respectively, in rats, effects that can be reversed by the mTORC1 inhibitor rapamycin (Item No. 13346).<sup>2</sup> It also reverses behavioral and synaptic deficits in a rat model of chronic stress-induced depression.

## References

1. Sengupta, S., Giaime, E., Narayan, S., *et al.* Discovery of NV-5138, the first selective brain mTORC1 activator. *Sci. Rep.* **9(1)**, 4107 (2019).
2. Kato, T., Pothula, S., Liu, R.-J., *et al.* Sestrin modulator NV-5138 produces rapid antidepressant effects via direct mTORC1 activation. *J. Clin. Invest.* **129(6)**, 2542-2554 (2019).

### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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## CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD

ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897

[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM