



# SZABO SCANDIC

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## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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# PRODUCT INFORMATION



**GDC-0349**

Item No. 24058

**CAS Registry No.:** 1207360-89-1

**Formal Name:** N-ethyl-N'-[4-[5,6,7,8-tetrahydro-4-[(3S)-3-methyl-4-morpholinyl]-7-(3-oxetanyl)pyrido[3,4-d]pyrimidin-2-yl]phenyl]-urea

**MF:** C<sub>24</sub>H<sub>32</sub>N<sub>6</sub>O<sub>3</sub>

**FW:** 452.6

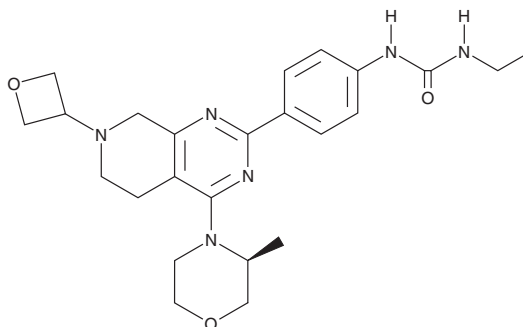
**Purity:** ≥98%

**UV/Vis.:** λ<sub>max</sub>: 297 nm

**Supplied as:** A crystalline solid

**Storage:** -20°C

**Stability:** ≥2 years



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

## Laboratory Procedures

GDC-0349 is supplied as a crystalline solid. A stock solution may be made by dissolving the GDC-0349 in the solvent of choice. GDC-0349 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of GDC-0349 is approximately 10 mg/ml in ethanol and 30 mg/ml in DMSO and DMF.

GDC-0349 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, GDC-0349 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. GDC-0349 has a solubility of approximately 0.1 mg/ml in a 1:9 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

## Description

GDC-0349 is a potent inhibitor of the mammalian target of rapamycin (mTOR; K<sub>i</sub> = 3.8 nM).<sup>1</sup> It is selective for mTOR over a panel of 266 kinases at a concentration of 1 μM. GDC-0349 inhibits proliferation of PC3 prostate cancer cells *in vitro* (EC<sub>50</sub> = 270 nM) and induces caspase-dependent apoptosis in head and neck squamous cell carcinoma (HNSCC) cells *via* inhibition of mTOR complex 1 (mTORC1) and mTORC2 and induction of autophagy.<sup>1,2</sup> Oral administration of GDC-0349 (10-80 mg/kg) inhibits tumor growth in MCF7-neo/Her-2 breast and PC3 prostate cancer mouse xenograft models in a dose-dependent manner. It also reduces tumor growth in an A549 lung cancer mouse xenograft model when administered in combination with the PI3K inhibitor GDC-0941 (Item No. 11600) or the MEK inhibitor cobimetinib (GDC-0973; Item No. 19563).

## References

1. Pei, Z., Blackwood, E., Liu, L., *et al.* Discovery and biological profiling of potent and selective mTOR inhibitor GDC-0349. *ACS Med. Chem. Lett.* **4**(1), 103-107 (2012).
2. Zhou, Y., Peng, Y., Tang, H., *et al.* Autophagy induction contributes to GDC-0349 resistance in head and neck squamous cell carcinoma (HNSCC) cells. *Biochem. Biophys. Res. Commun.* **477**(2), 174-180 (2016).

### 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.

### WARRANTY AND LIMITATION OF REMEDY

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