



# SZABO SCANDIC

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## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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### Lieferung & Zahlungsart

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### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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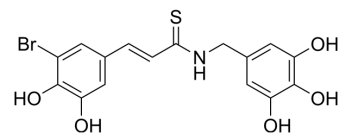
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## NT157

|                    |                                                                                                                                            |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Cat. No.:          | HY-100037                                                                                                                                  |
| CAS No.:           | 1384426-12-3                                                                                                                               |
| Molecular Formula: | C <sub>16</sub> H <sub>14</sub> BrNO <sub>5</sub> S                                                                                        |
| Molecular Weight:  | 412.26                                                                                                                                     |
| Target:            | Insulin Receptor; STAT                                                                                                                     |
| Pathway:           | Protein Tyrosine Kinase/RTK; JAK/STAT Signaling; Stem Cell/Wnt                                                                             |
| Storage:           | <div>Powder</div> <div>-20°C 3 years</div> <div>4°C 2 years</div> <div>In solvent</div> <div>-80°C 6 months</div> <div>-20°C 1 month</div> |



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : ≥ 30 mg/mL (72.77 mM)  
 \* "≥" means soluble, but saturation unknown.

|                           | Solvent<br>Concentration | Mass | 1 mg      | 5 mg       | 10 mg      |
|---------------------------|--------------------------|------|-----------|------------|------------|
|                           |                          |      |           |            |            |
| Preparing Stock Solutions | 1 mM                     |      | 2.4257 mL | 12.1283 mL | 24.2565 mL |
|                           | 5 mM                     |      | 0.4851 mL | 2.4257 mL  | 4.8513 mL  |
|                           | 10 mM                    |      | 0.2426 mL | 1.2128 mL  | 2.4257 mL  |

Please refer to the solubility information to select the appropriate solvent.

#### In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
 Solubility: ≥ 2.5 mg/mL (6.06 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
 Solubility: ≥ 2.5 mg/mL (6.06 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

NT157 (Tyrphostin NT157) is a selective IRS-1/2 inhibitor that induces Ser-phosphorylation and consequently the degradation of IRS-1/2. NT157 (Tyrphostin NT157) is a first-in-class anti-cancer agent that also targets Stat3 signaling pathway<sup>[1][2]</sup>.

#### IC<sub>50</sub> & Target

IRS-1/2<sup>[1]</sup>; Stat3<sup>[2]</sup>

#### In Vitro

NT157 (0.3-3 μM; 72 hours) shows a strong dose-dependent inhibition of growth in all cell lines tested, and the IC<sub>50</sub> s ranges from 0.3 to 0.8 μM<sup>[1]</sup>.  
 NT157 (1-3 μM; 24 hours) induces cell cycle arrest in MG-63 and U-2OS OS cells<sup>[1]</sup>.

NT157 (1-3  $\mu$ M; 48 hours) downregulates the Tyr-phosphorylation of IRS-1 in the MG-63 and U-2OS cells<sup>[1]</sup>.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

#### Cell Proliferation Assay<sup>[1]</sup>

|                  |                                                                                                                 |
|------------------|-----------------------------------------------------------------------------------------------------------------|
| Cell Line:       | MG-63, OS-19, and U-2OS cells                                                                                   |
| Concentration:   | 0.3, 1, 3 $\mu$ M                                                                                               |
| Incubation Time: | 72 hours                                                                                                        |
| Result:          | Showed a strong dose-dependent inhibition of growth, and the IC <sub>50</sub> s ranges from 0.3 to 0.8 $\mu$ M. |

#### Cell Cycle Analysis<sup>[1]</sup>

|                  |                                              |
|------------------|----------------------------------------------|
| Cell Line:       | MG-63, U-2OS OS cells                        |
| Concentration:   | 1, 3 $\mu$ M                                 |
| Incubation Time: | 24 hours                                     |
| Result:          | Induced cell cycle arrest in the G2/M phase. |

#### Western Blot Analysis<sup>[1]</sup>

|                  |                                                                              |
|------------------|------------------------------------------------------------------------------|
| Cell Line:       | MG-63, U-2OS OS cells                                                        |
| Concentration:   | 1, 3 $\mu$ M                                                                 |
| Incubation Time: | 48 hours                                                                     |
| Result:          | Downregulated the Tyr-phosphorylation of IRS-1 in the MG-63 and U-2OS cells. |

#### In Vivo

NT157 (50 mg/kg; i.p.; three times per week for 6 weeks) significantly delayed tumor growth in castrated mice bearing LNCaP xenografts<sup>[3]</sup>.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

|                 |                                                                            |
|-----------------|----------------------------------------------------------------------------|
| Animal Model:   | 6- to 8- week-old male athymic nude mice (LNCaP xenografts) <sup>[3]</sup> |
| Dosage:         | 50 mg/kg                                                                   |
| Administration: | i.p.; three times per week for 6 weeks                                     |
| Result:         | Significantly delayed tumor growth.                                        |

#### CUSTOMER VALIDATION

- Nat Commun. 2018 Jul 4;9(1):2611.

See more customer validations on [www.MedChemExpress.com](http://www.MedChemExpress.com)

#### REFERENCES

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- [1]. Downregulated the Tyr-phosphorylation of IRS-1 in the MG-63 and U-2OS cells.
- [2]. Flashner-Abramson E, et al. Targeting melanoma with NT157 by blocking Stat3 and IGF1R signaling. *Oncogene*. 2016 May 19;35(20):2675-80.
- [3]. Ibuki N, et al. The tyrphostin NT157 suppresses insulin receptor substrates and augments therapeutic response of prostate cancer. *Mol Cancer Ther*. 2014 Dec;13(12):2827-39.
- [4]. Ishii H, et al. miR-130a and miR-145 reprogram Gr-1+CD11b+ myeloid cells and inhibit tumor metastasis through improved host immunity. *Nat Commun*. 2018 Jul 4;9(1):2611.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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