



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!  
See the following pages for more information!



### 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) 

## Tat-NTS peptide

<b>Cat. No.:</b>	HY-P10275
<b>Molecular Formula:</b>	C <sub>125</sub> H <sub>212</sub> N <sub>54</sub> O <sub>24</sub>
<b>Molecular Weight:</b>	2855.37
<b>Sequence:</b>	Tyr-Gly-Arg-Lys-Lys-Arg-Arg-Gln-Arg-Arg-Arg-Ser-Phe-Pro-His-Leu-Arg-Arg-Val-Ph e-NH <sub>2</sub>
<b>Sequence Shortening:</b>	YGRKKRRQRRRRSFPHLRRVF-NH <sub>2</sub>
<b>Target:</b>	Apoptosis
<b>Pathway:</b>	Apoptosis
<b>Storage:</b>	Please store the product under the recommended conditions in the Certificate of Analysis.

### BIOLOGICAL ACTIVITY

<b>Description</b>	Tat-NTS peptide is a cell-penetrating peptide with neuroprotective effects. Tat-NTS peptide can specifically inhibit the nuclear translocation of ANXA1 and reduce neuronal apoptosis in ischemic areas. Moreover, Tat-NTS peptide can reduce the volume of cerebral ischemic infarction and can be used in the research of ischemic stroke <sup>[1]</sup> .																
<b>In Vitro</b>	<p>Tat-NTS peptide (20 μM) blocks ANXA1 nuclear migration in neuronal cells without affecting the nuclear translocation of other proteins<sup>[1]</sup>.</p> <p>Tat-NTS peptide (20 μM) inhibits the binding of ANXA1 to p53, alleviates neuronal apoptosis induced by oxygen glucose deprivation/reperfusion (OGD/R), and has neuronal cytoprotective effects<sup>[1]</sup>.</p> <p>Tat-NTS peptide (20 μM) can significantly improve the viability of neuronal cells after OGD/R<sup>[1]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Western Blot Analysis<sup>[1]</sup></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Cell Line:</td> <td>neuronal cells</td> </tr> <tr> <td>Concentration:</td> <td>20 μM</td> </tr> <tr> <td>Incubation Time:</td> <td></td> </tr> <tr> <td>Result:</td> <td>Significantly decreased the level of ANXA1 protein in the nuclear fraction, and had no impact on the subcellular localization of p65 and β-catenin. Significantly decreased Bid protein levels. Significantly decreased OGD/R-triggered tBid expression and caspase-9, PARP, caspase-3 cleavage but had little effect on the activation of caspase-8.</td> </tr> </table> <p>RT-PCR<sup>[1]</sup></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Cell Line:</td> <td>neuronal cells</td> </tr> <tr> <td>Concentration:</td> <td>20 μM</td> </tr> <tr> <td>Incubation Time:</td> <td></td> </tr> <tr> <td>Result:</td> <td>Significantly decreased Bid mRNA levels.</td> </tr> </table>	Cell Line:	neuronal cells	Concentration:	20 μM	Incubation Time:		Result:	Significantly decreased the level of ANXA1 protein in the nuclear fraction, and had no impact on the subcellular localization of p65 and β-catenin. Significantly decreased Bid protein levels. Significantly decreased OGD/R-triggered tBid expression and caspase-9, PARP, caspase-3 cleavage but had little effect on the activation of caspase-8.	Cell Line:	neuronal cells	Concentration:	20 μM	Incubation Time:		Result:	Significantly decreased Bid mRNA levels.
Cell Line:	neuronal cells																
Concentration:	20 μM																
Incubation Time:																	
Result:	Significantly decreased the level of ANXA1 protein in the nuclear fraction, and had no impact on the subcellular localization of p65 and β-catenin. Significantly decreased Bid protein levels. Significantly decreased OGD/R-triggered tBid expression and caspase-9, PARP, caspase-3 cleavage but had little effect on the activation of caspase-8.																
Cell Line:	neuronal cells																
Concentration:	20 μM																
Incubation Time:																	
Result:	Significantly decreased Bid mRNA levels.																

## In Vivo

Tat-NTS peptide (0.5-10 mg/kg; nilateral Intracerebroventricular (i.c.v.) Injection; single dose) reduces the interaction between ANXA1 and importin  $\beta$  in C57BL/6 mice with middle cerebral artery occlusion (MCAO) and prevents the nuclear translocation of ANXA1 in vivo. Tat-NTS peptide alleviates neuronal apoptosis after ischemic injury in mice, exhibiting neuroprotective effects against cerebral ischemia<sup>[1]</sup>.

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

Animal Model:	MCAO C57BL/6 mice model <sup>[1]</sup>
Dosage:	0.5 mg/kg, 1 mg/kg, 2 mg/kg, 5 mg/kg, 10 mg/kg.
Administration:	Unilateral Intracerebroventricular (i.c.v.) Injection: Single dose. After undergoing 1-hour middle cerebral artery occlusion (MCAO)
Result:	Significantly inhibited the protein level of tBid, cleaved caspase-9, cleaved PARP, and caspase-3, and had little effect on the activation of caspase-8. Reduced the infarct volume and improved neurological outcomes following focal ischemic injury.

## REFERENCES

[1]. Li X, et al. A novel cell-penetrating peptide protects against neuron apoptosis after cerebral ischemia by inhibiting the nuclear translocation of annexin A1. Cell Death Differ. 2019 Jan;26(2):260-275.

**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA