

# PRODUCT INFORMATION



## Tat-Gap 19 (trifluoroacetate salt)

Item No. 36729

**Formal Name:** L-tyrosylglycyl-L-arginyl-L-lysyl-L-lysyl-L-arginyl-L-arginyl-L-glutaminy-L-arginyl-L-arginyl-L-arginyl-L-lysyl-L-glutaminy-L-isoleucyl-L- $\alpha$ -glutamyl-L-isoleucyl-L-lysyl-L-lysyl-L-phenylalanyl-L-lysine, trifluoroacetate salt

**Peptide Sequence:** YGRKKRRRQRKQIEIKKFK-OH

**MF:**  $C_{119}H_{212}N_{46}O_{26} \cdot XCF_3COOH$

**FW:** 2,703.3

**Purity:**  $\geq 95\%$

**Supplied as:** A solid

**Storage:**  $-20^\circ C$

**Stability:**  $\geq 4$  years

H-Tyr-Gly-Arg-Lys-Lys-Arg-Arg-Gln-Arg-Arg-Arg-Lys-Gln-Ile-Glu-Ile-Lys-Lys-Phe-Lys-OH  
 $\cdot XCF_3COOH$

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

### Laboratory Procedures

Tat-Gap 19 (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the Tat-Gap 19 (trifluoroacetate salt) in water. We do not recommend storing the aqueous solution for more than one day.

### Description

Tat-Gap 19 is a peptide inhibitor of connexin43 (Cx43) hemichannels.<sup>1</sup> It is composed of the HIV-1 Tat protein transduction domain linked to a nine-amino acid peptide corresponding to residues 128-136 of Cx43. Tat-Gap 19 (10  $\mu M$ ) inhibits glutamate-induced ATP release, a marker of Cx43 hemichannel activity, in primary rat hepatocytes.<sup>2</sup> It reduces infarct volume in a mouse model of cerebral ischemia-reperfusion injury induced by middle cerebral artery occlusion (MCAO) when administered at a dose of 25 mg/kg.<sup>1</sup> Intraperitoneal infusion of Tat-Gap 19 (1 mg/kg per day) reduces fibrotic lesion area and the area of hepatic stellate cells, precursors of myofibroblasts, expressing  $\alpha$ -smooth muscle actin ( $\alpha$ -SMA) in a mouse model of thioacetamide-induced liver injury.<sup>2</sup> It increases superoxide dismutase (SOD) activity in hepatic cells isolated from the same mice.

### References

1. Chen, B., Yang, L., Chen, J., *et al.* Inhibition of Connexin43 hemichannels with Gap19 protects cerebral ischemia/reperfusion injury via the JAK2/STAT3 pathway in mice. *Brain Res. Bull.* **146**, 124-135 (2019).
2. Crespo Yanguas, S., da Silva, T.C., Pereira, I.V.A., *et al.* TAT-Gap19 and carbenoxolone alleviate liver fibrosis in mice. *Int. J. Mol. Sci.* **19**(3), 817 (2018).

#### 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

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 12/18/2023

#### 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