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DATASHEET

TAT-Gap19

Product overview

Name	TAT-Gap19
Cat No	HB9841
Biological action	Blocker
Purity	>95%
Description	Cx43 hemichannel blocker. Active in vivo.

Biological Data

Biological description	Cx43 hemichannel blocker. Inhibits astroglial Cx43 hemichannels in a dose-dependent manner, without affecting gap junction channels and reduces mitochondrial potassium influx. Also reduces intracellular ROS generation, cell death, inflammation and premature cell senescence.

Solubility & Handling

Storage instructions	-20°C
Solubility overview	Soluble in water (1 mg/ml)
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

Chemical Data

Molecular Weight	2703.28
Molecular Formula	$C_{119}H_{212}N_{46}O_{26}$
CAS Number	1507930-54-2
PubChem identifier	127021051
SMILES	[H]N[C@@H](CC1=CC=C(O)C=C1)C(=O)NCC(=O)N[C@@H](CCCNC(N)=N)C(=O)N[C@@H](CCCCN)C(=O)N[C@@H](CCCCN)C(=O)N[C@@H](CCCNC(N)=N)C(=O)N[C@@H](CCCNC(N)=N)C(=O)N[C@@H](CCC(N)=O)C(=O)N[C@@H](CCCNC(N)=N)C(=O)N[C@@H](CCCNC(N)=N)C(=O)N[C@@H](CCCNC(N)=N)C(=O)N[C@@H](CCCCN)C(=O)N[C@@H](CCC(N)=O)C(=O)N[C@@H]([C@@H](C)CC)C(=O)N[C@@H](CCC(O)=O)C(=O)N[C@@H]([C@@H](C)CC)C(=O)N[C@@H](CCCCN)C(=O)N[C@@H](CCCCN)C(=O)N[C@@H](CC1=CC=CC=C1)C(=O)N[C@@H](CCCCN)C(O)=O
Source	Synthetic
InChiKey	ALNCFPIRTLVJPY-XELKYWHDNA-N

References

Gap19, a Cx43 Hemichannel Inhibitor, Acts as a Gating Modifier That Decreases Main State Opening While Increasing Substate Gating.

Lissoni A et al (2020) International journal of molecular sciences 21

PubMedID 33027889

Connexin43 Hemichannel Targeting With TAT-Gap19 Alleviates Radiation-Induced Endothelial Cell Damage.

Ramadan R et al (2020) Frontiers in pharmacology 11
PubMedID 32210810

The connexin43 mimetic peptide Gap19 inhibits hemichannels without altering gap junctional communication in astrocytes.

Abudara V et al (2014) Frontiers in cellular neuroscience 8
PubMedID 25374505