

Product Name: Gap 26
CAS Number: 197250-15-0

Catalog No.: 1950 **Batch No.:** 11

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₇₀H₁₀₇N₁₉O₁₉S
Batch Molecular Weight: 1550.79
Physical Appearance: White lyophilised solid
Net Peptide Content: 68%
Counter Ion: TFA
Solubility: Soluble to 2 mg/ml in water
Storage: Desiccate at -20°C
Peptide Sequence: Val-Cys-Tyr-Asp-Lys-Ser-Phe-Pro-Ile-Ser-
His-Val-Arg

2. ANALYTICAL DATA

HPLC: Shows 98% purity
Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical			Actual		
Ala			Lys	1.00	0.95
Arg	1.00	1.02	Met		
Asx	1.00	0.97	Phe	1.00	1.09
Cys	1.00	Detected	Pro	1.00	1.18
Glx			Ser	2.00	1.99
Gly			Thr		
His	1.00	0.91	Trp		
Ile	1.00	1.06	Tyr	1.00	1.01
Leu			Val	2.00	2.11

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Description:

Peptide, corresponding to residues 63 - 75 of connexin 43, which is a gap junction blocker. Attenuates rhythmic contractile activity of rabbit arterial smooth muscle ($IC_{50} = 28.4 \mu M$). Also inhibits IP_3 -induced ATP release, without inhibiting gap junctional coupling in endothelial cells.

Physical and Chemical Properties:

Batch Molecular Formula: $C_{70}H_{107}N_{19}O_{19}S$
Batch Molecular Weight: 1550.79
Physical Appearance: White lyophilised solid

Peptide Sequence:

Val-Cys-Tyr-Asp-Lys-Ser-Phe-Pro-Ile-Ser-
His-Val-Arg

Storage: Desiccate at $-20^{\circ}C$

Solubility & Usage Info:

Soluble to 2 mg/ml in water
This product is supplied as a lyophilized solid and may be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

Net Peptide Content: 68% (Remaining weight made up of counterions and residual water).

Counter Ion: TFA

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a $45-60^{\circ}C$ water bath).

Peptides in solution are much less stable than in lyophilized form. This is especially true for peptides whose sequences contain amino acids such as Cys, Met, Trp, Asn, Gln, and N-terminal Glu.

Therefore we recommend storing peptides in solution for as short a time as possible. Avoid repeated freeze thaw cycles by dividing the peptide solution into aliquots and storing the aliquots at $-20^{\circ}C$. Any portion of an aliquot unused after thawing should be discarded.

Peptides stored in solution can occasionally be susceptible to bacterial degradation. We recommend using sterile solutions or passing the peptide solution through a $0.2 \mu m$ filter to remove potential bacterial contamination whenever possible.

References:

Braet et al (2003) Photoliberating inositol-1,4,5-trisphosphate triggers ATP release that is blocked by the connexin mimetic peptide gap 26. *Cell Calcium* **33** 37. PMID: 12526886.

Chaytor et al (1997) Peptides homologous to extracellular loop motifs of connexin 43 reversibly abolish rhythmic contractile activity in rabbit arteries. *J.Physiol.* **503** 99. PMID: 9288678.

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