

PRODUCT INFORMATION

Gap 26 (trifluoroacetate salt)

Item No. 36625

Formal Name: L-valyl-L-cysteinyl-L-tyrosyl-L- α -aspartyl-L-lysyl-L-seryl-L-phenylalanyl-L-prolyl-L-isoleucyl-L-seryl-L-histidyl-L-valyl-L-arginine, trifluoroacetate salt

Synonyms: Gap Junction Peptide 26, VCYDKSFPIHVR

MF: $C_{70}H_{107}N_{19}O_{19}S \cdot XCF_3COOH$

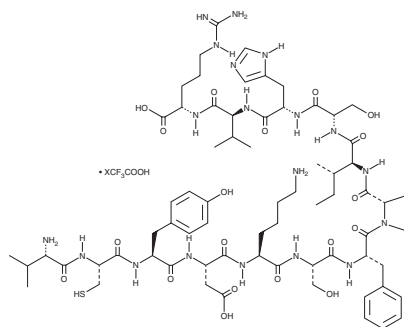
FW: 1,550.8

Purity: $\geq 98\%$

Supplied as: A Solid

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

Stability: ≥ 4 years



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

Laboratory Procedures

Gap 26 (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the gap 26 (trifluoroacetate salt) in the solvent of choice, which should be purged with an inert gas. Gap 26 (trifluoroacetate salt) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of gap 26 (trifluoroacetate salt) in DMSO is approximately 12 mg/ml and approximately 33 mg/ml in ethanol and DMF.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of gap 26 (trifluoroacetate salt) can be prepared by directly dissolving the solid in aqueous buffers. The solubility of gap 26 (trifluoroacetate salt) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Gap 26 is a connexin-mimetic peptide that corresponds to amino acids 63-75 of extracellular loop 1 in connexin 43.¹ It inhibits phenylephrine-induced rhythmic contractile activity in isolated rabbit superior mesenteric arterial strips ($IC_{50} = 28.4 \mu M$). Gap 26 (0.25 mg/ml) inhibits photoliberated $Ins(1,4,5)-P_3$ -induced ATP release in ECV304 cells.² It decreases the infarct size in a rat model of myocardial infarction induced by left coronary artery occlusion when administered at doses of 0.5, 1, and 10 $\mu g/kg$.³

References

1. Chaytor, A.T., Evans, W.H., and Griffith, T.M. Peptides homologous to extracellular loop motifs of connexin 43 reversibly abolish rhythmic contractile activity in rabbit arteries. *J. Physiol.* **503**(1), 99-110 (1997).
2. Braet, K., Vandamme, W., Martin, P.E.M., et al. Photoliberating inositol-1,4,5-trisphosphate triggers ATP release that is blocked by the connexin mimetic peptide gap 26. *Cell Calcium* **33**(1), 37-48 (2003).
3. Hawat, G., Hélie, P., and Baroudi, G. Single intravenous low-dose injections of connexin 43 mimetic peptides protect ischemic heart *in vivo* against myocardial infarction. *J. Mol. Cell. Cardiol.* **53**(4), 559-566 (2012).

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.

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