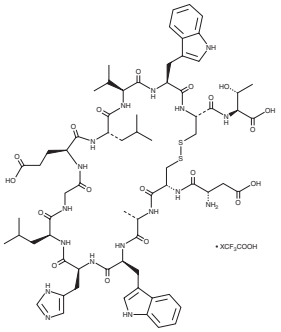
PRODUCT INFORMATION

FcIII Peptide (trifluoroacetate salt)

Item No. 44809

Formal Name: L-α-aspartyl-L-cysteinyl-L-alanyl-L-tryptophyl-L-histidyl-L-leucylglycyl-L-α-glutamyl-L-leucyl-L-valyl-L-tryptophyl-L-cysteinyl-L-threonine, cyclic (2→12)-disulfide, trifluoroacetate salt
Peptide Sequence: D[CAWHLGELVWC]T-OH
MF: $C_{69}H_{95}N_{17}O_{19}S_2 \bullet XCF_3COOH$
FW: 1,530.7
Purity: ≥98%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

FcIII peptide (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the FcIII peptide (trifluoroacetate salt) in the solvent of choice, which should be purged with an inert gas. FcIII peptide (trifluoroacetate salt) is sparingly soluble (1-10 mg/ml) in DMSO.

Description

FcIII peptide is a synthetic, cyclic 13-amino acid peptide and fusion tag.[1-3] It inhibits binding of the protein A Z domain to IgG Fc with a K_i value of 25 nM.[1] FcIII peptide can be added to the N- or C-terminus of a protein and has been used as an epitope tag on recombinant proteins to facilitate their detection and purification.[2,3] The inclusion of FcIII peptide on recombinant proteins also increases their plasma half-life in mice.[2] FcIII peptide has also been used as a building block in the synthesis of artificial human Fc receptors to facilitate IgG uptake in Jurkat cells, which do not intrinsically express Fc receptors.[4]

References

1. DeLano, W.L., Ultsch, M.H., de Vos, A.M., *et al.* Convergent solutions to binding at a protein-protein interface. *Science* **287(5456)**, 1279-1283 (2000).
2. Sockolosky, J.T., Kivimäe, S., and Szoka, F.C. Fusion of a short peptide that binds immunoglobulin G to a recombinant protein substantially increases its plasma half-life in mice. *PLoS One* **9(7)**, e102566 (2014).
3. Feng, S., Tian, E., Zhang, L., *et al.* Development of the Fc-III tagged protein expression system for protein purification and detection. *PLos One* **7(8)**, e44208 (2012).
4. Boonyarattanakalin, S., Martin, S.E., Sun, Q., *et al.* A synthetic mimic of human Fc receptors: Defined chemical modification of cell surfaces enables efficient endocytic uptake of human immunoglobulin-G. *J. Am. Chem. Soc.* **128(35)**, 11463-11470 (2006).

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