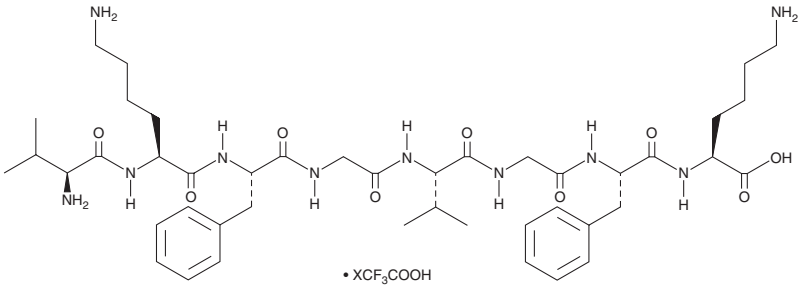
PRODUCT INFORMATION

CALP3 (trifluoroacetate salt)

Item No. 24403

Formal Name:	L-valyl-L-lysyl-L-phenylalanylglycyl-L-valylglycyl-L-phenylalanyl-L-lysine, trifluoroacetate salt
Synonym:	Calcium-like peptide 3
MF:	$C_{44}H_{68}N_{10}O_9 \bullet XCF_3COOH$
FW:	881.1
Purity:	≥98%
Supplied as:	A crystalline 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

CALP3 (trifluoroacetate salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the CALP3 (trifluoroacetate salt) in the solvent of choice. CALP3 (trifluoroacetate salt) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of CALP3 (trifluoroacetate salt) in ethanol is approximately 0.5 mg/ml and approximately 5 mg/ml in DMSO 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 CALP3 (trifluoroacetate salt) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of CALP3 (trifluoroacetate salt) in PBS, pH 7.2, is approximately 0.5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

CALP3 is a calcium-like peptide that contains the first eight residues of CALP2, which is a 12-residue peptide that interacts with EF hand motif 4 in human calmodulin to activate it in the absence of calcium.[1] It acts as a cell-permeable inhibitor of calcium influx through glutamate receptor channels in cultured rat neocortical neurons (IC_{50} = 37.25 µM) thereby inhibiting excitatory cytotoxicity (IC_{50} = 50.97 µM) and apoptosis (IC_{50} = 33.41 µM).[2]

References

1. Villain, M., Jackson, P.L., Manion, M.K., *et al.* *De novo* design of peptides targeted to the EF hands of calmodulin. *J. Biol. Chem.* **275(4)**, 2676-2685 (2000).
2. Manion, M.K., Su, Z., Villain, M., *et al.* A new type of Ca^{2+} channel blocker that targets Ca^{2+} sensors and prevents Ca^{2+}-mediated apoptosis. *FASEB J.* **14(10)**, 1297-1306 (2000).

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