

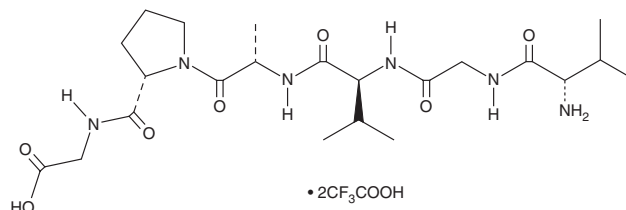
PRODUCT INFORMATION



Chemotactic Domain of Elastin (trifluoroacetate salt)

Item No. 45933

CAS Registry No.: 3053365-59-3
Formal Name: L-valylglycyl-L-valyl-L-alanyl-L-prolylglycine, bis(trifluoroacetate)
Synonyms: Hexapeptide 12, Val-Gly-Val-Ala-Pro-Gly-OH
Peptide Sequence: VGVAPG-OH
MF: $C_{22}H_{38}N_6O_7 \cdot 2CF_3COOH$
FW: 602.6
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

Chemotactic domain of elastin (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the chemotactic domain of elastin (trifluoroacetate salt) in the solvent of choice, which should be purged with an inert gas. Chemotactic domain of elastin (trifluoroacetate salt) is sparingly soluble (1-10 mg/ml) in DMSO and slightly soluble (0.1-1 mg/ml) in ethanol.

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 chemotactic domain of elastin (trifluoroacetate salt) can be prepared by directly dissolving the solid in aqueous buffers. Chemotactic domain of elastin (trifluoroacetate salt) is sparingly soluble (1-10 mg/ml) in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

Description

Chemotactic domain of elastin is an elastin-derived peptide (EDP) and matrikine.^{1,2} It induces migration of primary bovine fibroblasts and isolated human monocytes at 10 nM.¹ Chemotactic domain of elastin also induces migration of M-27 Lewis lung carcinoma cells *in vitro* ($EC_{50} = \sim 3$ nM).³ It increases the production of reactive oxygen species (ROS) in primary mouse astrocytes at 0.1 nM.⁴ Chemotactic domain of elastin (150 $\mu g/kg$) decreases lifespan, locomotor activity, and lean tissue percentage, increases body weight and fat tissue percentage, and induces kyphosis in mice.² Conjugation of chemotactic domain of elastin to a cell-penetrating peptide (CPP) increases the transfection efficiency of nucleic acid complexes.⁵

References

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2. Yi, J., Wang, Y., Sui, H., *et al.* Elastin-derived extracellular matrix fragments drive aging through innate immune activation. *Nat. Aging* **5**(12), 2380-2398 (2025).
3. Blood, C.H., Sasse, J., Brodt, P., *et al.* Identification of a tumor cell receptor for VGVAPG, an elastin-derived chemotactic peptide. *J. Cell Biol.* **107**(5), 1987-1993 (1988).
4. Szychowski, K.A. and Gmiński, J. The VGVAPG peptide regulates the production of nitric oxide synthases and reactive oxygen species in mouse astrocyte cells *in vitro*. *Neurochem. Res.* **44**(5), 1127-1137 (2019).
5. Shen, W.-J., Tian, D.-M., Fu, L., *et al.* Elastin-derived VGVAPG fragment decorated cell-penetrating peptide with improved gene delivery efficacy. *Pharmaceutics* **15**(2), 670 (2023).

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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