

PRODUCT INFORMATION



Ac-VDVAD-CHO (trifluoroacetate salt)

Item No. 27136

Formal Name: N-acetyl-L-valyl-L- α -aspartyl-L-valyl-N-[(1S)-2-carboxy-1-formylethyl]-L-alaninamide, trifluoroacetate salt

Synonym: Ac-Val-Asp-Val-Ala-Asp-CHO

MF: C₂₃H₃₇N₅O₁₀ • XCF₃COOH

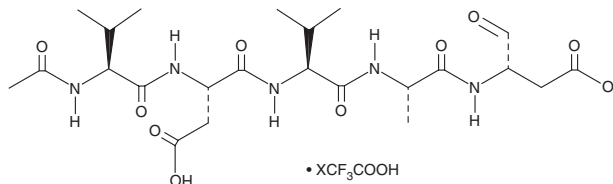
FW: 543.6

Purity: \geq 95%

Supplied as: A solid

Storage: -20°C

Stability: \geq 4 years



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

Laboratory Procedures

Ac-VDVAD-CHO (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the Ac-VDVAD-CHO (trifluoroacetate salt) in water. The solubility of Ac-VDVAD-CHO (trifluoroacetate salt) in water is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Ac-VDVAD-CHO is an inhibitor of caspase-2, -3, and -7 (K_i s = 3.5, 1, and 7.5 nM, respectively).¹ It inhibits caspase-2 and -3 in cell-based assays with IC₅₀ values of 1,334 and 346 nM, respectively.² Ac-VDVAD-CHO (3 μ M) inhibits increases in alkaline phosphatase and caspase-2 and -3 activity induced by human recombinant bone morphogenic protein 4 (BMP4) in MC3T3-E1 murine bone marrow stromal cells.³ It also inhibits BMP4-induced cell cycle arrest at the G₀/G₁ phase in MC3T3-E1 cells.

References

1. Talanian, R.V., Quinlan, C., Trautz, S., *et al.* Substrate specificities of caspase family proteases. *J. Biol. Chem.* **272**(15), 9677-9682 (1997).
2. Maillard, M.C., Brookfield, F.A., Courtney, S.M., *et al.* Exploiting differences in caspase-2 and -3 S₂ subsites for selectivity: Structure-based design, solid-phase synthesis and in vitro activity of novel substrate-based caspase-2 inhibitors. *Bioorg. Med. Chem.* **19**(19), 5833-5851 (2011).
3. Mogi, M. and Togari, A. Activation of caspases is required for osteoblastic differentiation. *J. Biol. Chem.* **278**(48), 47477-47482 (2003).

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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