

Product Data Sheet

Product Name: Z-Asp-CH2-DCB

Cat. No.: GC12223

Chemical Properties

Cas. No. 153088-73-4

Chemical Name (3S)-4-carboxy-2-oxo-3-[[[(phenylmethoxy)carbonyl]amino]butyl ester 2,6-dichloro-benzoic acid

SMILES ClC1=CC(=CC(=C1)OC(=O)C[C@@H](NC(=O)OCC2=CC=CC=C2)C(=O)O)C(=O)O

Formula $C_{20}H_{17}Cl_2NO_7$

M.Wt 454.3

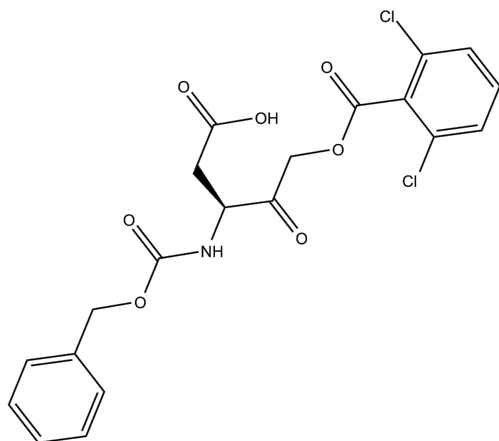
Solubility $\leq 33\text{mg/ml}$ in ethanol; 25mg/ml in DMSO; 25mg/ml in dimethyl formamide

Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37°C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Background

Z-Asp-CH2-DCB is an inhibitor of ICE/Ced-3 family proteases [1].

Caspases (ICE/ Ced3 proteases) play key biological roles in inflammation and mammalian apoptosis.

Caution: Product has not been fully validated for medical applications. For research use only.

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Caspases are a closely related family of cysteine proteases that play a key role in apoptotic cell death. Activation of Caspases shows important roles in programmed cell death such as pyroptosis and necroptosis to protect cells from stress signals and pathogenic attack. Caspases play an important role in inflammation. Caspases have also been involved in cell proliferation, cell differentiation, tumour suppression, neural development and axon guidance and ageing. Deficiency in caspase results in tumour development. Overactivation of some caspases can lead to excessive programmed cell death, such as caspase-3 [2].

Z-Asp-CH₂-DCB blocked apoptosis in U937 cells triggered by antitumor agents. Z-Asp-CH₂-DCB also blocked apoptosis in IFN- γ -pretreated cells. Z-Asp-CH₂-DCB completely inhibited DNA fragmentation induced by γ -irradiation, antitumor agents, or anti-Fas antibody [1].

References:

- [1] Tamura T, Ueda S, Yoshida M, et al. Interferon- γ Induces Ice Gene Expression and Enhances Cellular Susceptibility to Apoptosis in the U937 Leukemia Cell Line[J]. Biochemical and biophysical research communications, 1996, 229(1): 21-26.
- [2] Brker L E, Krut F A E, Giaccone G. Cell death independent of caspases: a review[J]. Clinical Cancer Research, 2005, 11(9): 3155-3162.

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