

Caspase Inhibitor

Z-IETD-FMK
(Caspase-8/FLICE inhibitor)

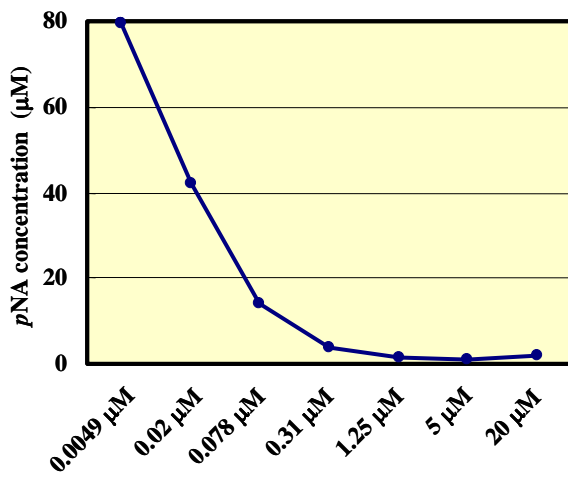
Code No.
4805-510

Quantity
20 μ L (100 mM)

BACKGROUND: Caspases are members of the cysteine aspartic acid-specific protease family, which is activated by a variety of signals, including death receptor ligation, DNA damages, serum starvation and stress. Caspases play a role in chromatin fragmentation into nucleosome units, and caspase activation is associated with the unique apoptosis cell morphology of chromatin condensation, nucleus fragmentation and cytoplasmic integrity. Active caspase recognizes several molecules as substrates during apoptosis. For example, ICAD (inhibitor of caspase-activated deoxyribonuclease) is inactivated while CAD (caspase-activated deoxyribonuclease) is indirectly activated by caspase-3. Caspases recognize specific peptide sequences containing an aspartic acid, and cleave these substrate proteins immediately following this aspartic residue. The tetra-peptide sequence "IETD" is preferentially recognized by caspase-8. Z-IETD-FMK is a powerful, irreversible and cell permeable inhibitor for caspase-8.

FORMULATION: 100 mM Z-IETD-FMK in DMSO

STORAGE: This product is stable for 3 years from the date of manufacture when stored at -20°C .



Z-IETD-FMK concentration

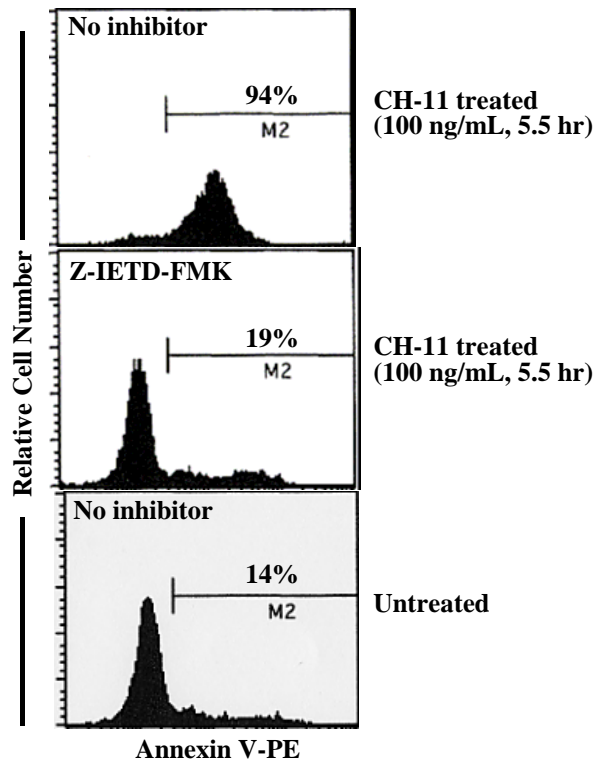
Inhibition of caspase-8 activity in cytosol of CH-11 treated Jurkat cells by Z-IETD-FMK. After Jurkat cells were treated with 100 ng/mL of anti-Fas monoclonal antibody (clone CH-11, MBL code no. SY-001) for 4 hours, caspase-8 activity was measured with Ac-IETD-pNA (final concentration 500 μM) in the presence of indicated concentration of Z-IETD-FMK (MBL; code no 4805-510).

INTENDED USE:

For Research Use Only. Not for use in diagnostic procedures.

REFERENCES:

- 1) Vu, C.C., *et al.*, *J. Biol. Chem.* **276**, 37602-37611 (2001)
- 2) Hatano, E., *et al.*, *J. Biol. Chem.* **275**, 11814-11823 (2000)



Flow cytometric analysis of Jurkat cells. After Jurkat cells were treated with 100 ng/mL of anti-Fas monoclonal antibody (clone CH-11, MBL code no. SY-001) or both CH-11 and 40 μM Z-IETD-FMK (MBL; code no. 4805-510) for 5.5 hours, cells were stained with Annexin V-PE (MBL; code no. 4696-100) to detect apoptosis. The results show that 94% of cells in CH-11 treated cells were induced apoptosis and in both CH-11 and caspase inhibitor treated cells the level of apoptosis was reduced to 19%, which was a little larger than untreated control. These results indicated that Z-IETD-FMK could block apoptosis by caspase-8.

RELATED PRODUCTS:

<u>Inhibitor</u>	code no.
Z-DEVD-FMK (Caspase-3 inhibitor)	4800-510
Z-IETD-FMK (Caspase-8 inhibitor)	4805-510
Z-LEHD-FMK (Caspase-9 inhibitor)	4810-510
Z-VAD-FMK (Caspase inhibitor)	4800-520
<u>Kit</u>	code no.
MEBCYTO [®] Apoptosis Kit (Annexin V-FITC kit)	4700
MEBSTAIN Apoptosis TUNEL Kit II	8441
MEBSTAIN Apoptosis TUNEL Kit Direct	8445
APOPCYTO [™] Annexin V-Azami-Green Apoptosis detection kit	4690
APOPCYTO [™] Caspase-3 Colorimetric Assay Kit	4800
APOPCYTO [™] Caspase-8 Colorimetric Assay Kit	4805
APOPCYTO [™] Caspase-9 Colorimetric Assay Kit	4810
APOPCYTO [™] Caspase-3 Fluorometric Assay Kit	4815
APOPCYTO [™] Caspase-8 Fluorometric Assay Kit	4820
APOPCYTO [™] Caspase-9 Fluorometric Assay Kit	4825
APOPCYTO [™] Intracellular Caspase Activity Detection Kit	4830
APOPCYTO [™] Intracellular Caspase-3 Activity Detection Kit	4817
APOPCYTO [™] Intracellular Caspase-8 Activity Detection Kit	4822
APOPCYTO [™] Intracellular Caspase-9 Activity Detection Kit	4827
sFas Ligand ELISA Kit	5255
sFas(S) ELISA Kit	5251
Cytochrome c ELISA Kit	5265
<u>Recombinant Protein</u>	code no.
Active Caspase-3 (Human, 0.1 mL)	E001
Active Caspase-7 (Human, 0.1 mL)	E002
<u>Others</u>	code no.
Annexin V-FITC Reagent	4700-100
Annexin V-Biotin Reagent	4695-100
Propidium Iodide (PI)	4700-200
Cell Lysis buffer	4800-100
<u>Antibody</u>	code no.
Anti-Fas (CH-11)	SY-001