

Z-DEVD-ProRed™ 620

Ordering Information

Product Number: 13433 (1 mg)

Storage Conditions

Store at -20 °C

General Properties

Molecular Weight: 1565.50
Maximum excitation: 534 nm
Maximum Emission: 619 nm
Solvents: DMSO

Biological Applications

Caspases play important roles in apoptosis and cell signaling. The activation of Caspase 3/7 (CPP32/apopain) is important for the initiation of apoptosis. Caspase 3/7 is also identified as a drug-screening target. Caspase inhibitors have anti-cancer and other pharmacological potentials. It has been proven that Caspase 3/7 has substrate selectivity for the peptide sequence Asp-Glu-Val-Asp (DEVD). ProRed™-derived protease substrates are colorless and non-fluorescent. Cleavage of blocking protease-cleavable peptide residue by caspases generates the strongly red fluorescent ProRed™ that can be monitored fluorimetrically at ~620 nm with excitation of ~535 nm. ProRed™-derived caspase substrates are the most sensitive red indicators for the fluorimetric detection of various caspase activities. This DEVD-ProRed™ substrate is specific for detecting caspases 3 and 7.

Sample Protocol

1. Make a **10 mM stock solution** by adding 65 µL of DMSO into the vial of 1 mg Z-DEVD-ProRed™ 620
2. Prepare **2X Caspase 3/7 assay solution** as the following:
50 µL (Z-DEVD)₂-R110 stock solution (10 mM)
100 µL DTT (1M)
400 µL EDTA (100 mM)
10 mL Tris Buffer (20 mM), pH =7.4
3. Mix equal volume of the caspase3/7 standards or samples with 2X caspase 3/7 assay solution, and incubate at room temperature for at least 1 hour.
4. Monitor the fluorescence increase at Ex/Em = 535/620 nm.

References

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3. Y. A. Lazebnik, S. H. Kaufmann, S. Desnoyers, G. G. Poirier, W. C. Earnshaw, *Nature* 371, 346-347 (1994).
4. P. Villa, S. H. Kaufmann, W. C. Earnshaw, *Trends Biochem.Sci.* 22, 388-393 (1997).
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6. M. Fennell, H. Chan, A Wood. *J Biomol Screen*, 11, 296 (2006)
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Disclaimer: This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact our technical service representative for more information.