

Instruction Manual

Catalog Number	PK-CA577-1071-200
Description	Ready-to-use fluorometric substrate for caspases that recognize the amino acid sequence VDVAD. Caspase activity can be quantified by fluorescent detection of free AFC after cleaved from the peptide substrate VDVAD-AFC at Ex/Em = 400/505 nm using a fluorometer or a fluorescence plate reader. Alternatively, a shift in fluorescence from blue to green upon cleavage can be visualized using a hand-held long-UV lamp. The ready-to-use caspase substrate provides an economic alternative for researchers who perform large amount of caspase assays. Cell Lysis Buffer (PK-CA577-1067-100, -400), 2X Reaction Buffer (PK-CA577-1068-20, -80), DTT (Cat. # PK-CA577-1201-1), and other reagents used for caspase activity assays are also available separately.
Quantity	200 assays
Sequence / Molecular Weight / Molecular Formula	Ac-Val-Asp-Val-Ala-Asp-AFC (AFC, 7-amino-4-trifluoromethyl coumarin); 771 Da
Purity	>98% by HPLC analysis
Appearance / Formulation / Solubility	1 mM in DMSO
Storage & Stability	Store at -20°C, protected from light. Stable for 6 months
Applications	<ol style="list-style-type: none"> 1. Induce apoptosis in cells by desired method. Concurrently incubate a control culture without induction. 2. Count cells and pellet $1-5 \times 10^6$ cells or use 50-200 μg cell lysates if protein concentration has been measured. 3. Resuspend cells in 50 μl of chilled Cell Lysis Buffer (Cat.# PK-CA577-1067-100, PK-CA577-1067-400). 4. Incubate cells on ice for 10 minutes. 5. Add 50 μl of 2X Reaction Buffer (Cat. # PK-CA577-PK-CA577-1068-20, PK-CA577-1068-80) containing 10 μM DTT (Cat. # PK-CA577-1201-10) to each sample. 6. Add 5 μl of the 1 mM VDVAD-AFC (50 μM final conc.) into each tube individually and incubate at 37°C for 1-2 hour. 7. Read samples in a fluorometer equipped with a 400-nm excitation filter and 505-nm emission filter. For a plate-reading set-up, transfer the samples to a 96-well plate. You may perform the entire assay directly in a 96-well plate. <p>Fold-increase in VDVAD-dependent caspase activity can be determined by comparing these results with the level of the uninduced control.</p>
References	NA
Caution	NA

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