

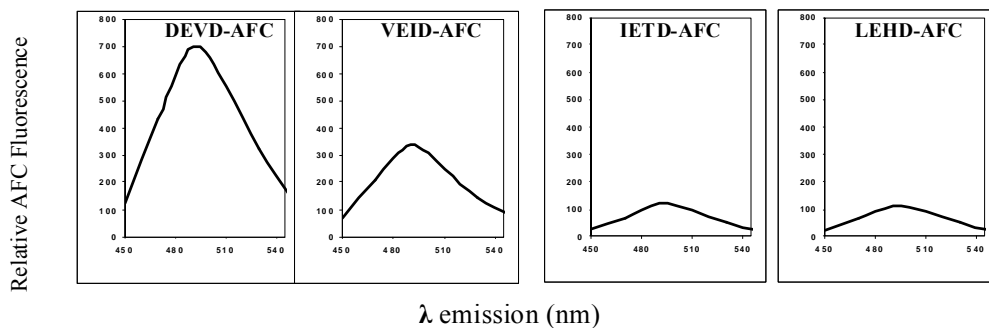
# Recombinant Human Active Caspase-3/CCP32

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Rev. 1.00

<b>Catalog Number:</b>	PHZ0014
<b>Quantity:</b>	100 units/vial
<b>Lot Number:</b>	See product label.
<b>Purity:</b>	Recombinant human active caspase-3 is produced in <i>E. coli</i> and purified via sequential chromatography.
<b>Biological Activity:</b>	The enzyme activity of this product was analyzed using caspase-3 fluorometric (DEVD-AFC) and colorimetric (DEVD-pNA) substrates. A unit of the active recombinant caspase-3/CCP32 is defined as the enzyme activity that cleaves 1 nmole of the caspase substrate, DEVD-pNA, per hour at 37°C at saturated substrate concentration.
<b>Formulation:</b>	Lyophilized, carrier-free.
<b>Sterility:</b>	Filtered prior to lyophilization through a 0.22 micron sterile filter.
<b>Specificity:</b>	This recombinant active caspase-3 cleaves preferentially any proteins containing the amino acid sequence, DEVD. Caspase-3 (also known as CPP32, Yama or apopain) is a member of the interleukin-1 $\beta$ converting enzyme (ICE) family of cysteine proteases. Caspase-3 exists in cells as an inactive 32 kDa proenzyme, called pro-caspase-3. Pro-caspase-3 is cleaved into active 17 and 12 kDa subunits by upstream proteases such as caspase-6 (Mch2), caspase-8 (FLICE) and granzyme B during apoptosis. The downstream substrates of caspase-3 include poly (ADP ribose) polymerase (PARP), sterol regulatory element binding proteins (SREBPs), nuclear lamins and others. The overexpression of caspase-3 can result in apoptosis. Likewise, the inhibition of caspase-3 or other caspases can prevent cells from entering the apoptotic pathway.
<b>Reconstitution Recommendation:</b>	Reconstitute to 1 unit per $\mu$ L in PBS containing 15% glycerol.
<b>Suggested Working Dilutions:</b>	For caspase-3 activity assay, use 0.5–1 units per test for fluorometric caspase assay and 2–5 units per test is recommended for colorimetric assay. The optimal concentration should be determined for each specific application.
<b>Applications:</b>	The active caspase-3 is suitable for study of caspase-3 inhibitors, in combination with caspase-3 enzyme activity assays. It can also be used as a positive control in caspase assays or in determining the specificity of substrates.
<b>Storage:</b>	Store at -70°C. Following reconstitution in PBS, the enzyme should be aliquoted and immediately stored at -70°C. Avoid multiple freeze/thaw cycles as activity might decrease.
<b>Expiration Date:</b>	See product label.
<b>References:</b>	Nicholson, D.W., <i>et al.</i> (1995) Identification and inhibition of the ICE/CED-3 protease necessary for mammalian apoptosis. <i>Nature</i> 376(6535):37–43. Stennicke, H.R., <i>et al.</i> (1997) Biochemical characteristics of caspases-3, -6, -7, and -8. <i>J. Biol. Chem.</i> 272(41):25719–23. Thornberry, N.A., <i>et al.</i> (1998) Caspases: enemies within. <i>Science</i> 281(5381):1312–6.

The enzymatic activity of recombinant human caspase-3: 0.5 unit of active caspase-3 was incubated with fluorometric enzyme assay kits of caspase-3 (DEVD-AFC), caspase-6 (VEID-AFC), caspase-8 (IETD-AFC, Cat. No. KHZ0052) and caspase-9 (LEHD-AFC). The cleavage of the substrates was analyzed by spectrofluorometer using an excitation at 400 nm and an emission of 450–550 nm wavelength. The active caspase-3 preferentially cleaves DVED-AFC, a caspase-3 substrate.



For complete caspase-3 assay protocol, please refer to ApoTarget™ Caspase-3/CCP32 Fluorometric or Colorimetric Assay Kit (Cat. No. KHZ0022).

### Explanation of Symbols

The symbols present on the product label are explained below:

Symbol	Description
	Catalog Number
	Research Use Only
	Use by
	Manufacturer
	Without, does not contain
	Protect from light
	Directs the user to consult instructions for use (IFU), accompanying the product.

Symbol	Description
	Batch code
	In vitro diagnostic medical device
	Temperature limitation
	European Community authorized representative
	With, contains
	Consult accompanying documents

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