

## Instruction Manual

<b>Catalog Number</b>	PK-RP577-1082-25
<b>Description</b>	Caspase-2 (also known as Ich-1, Nedd-2) is a member of the caspase-family of cysteine proteases. Similar to other caspases, caspase-2 also exists in cells as an inactive proenzyme. During apoptosis pro-caspase-2 is processed at aspartate residues by self-proteolysis and/or cleavage by upstream caspases. The processed active caspase-2 is a heterotetramer consisting of two large (19 kDa) and two small (12 kDa) subunits. The recombinant active human caspase-2 was expressed in E. coli. The active caspase-2 preferentially cleaves caspase-2 substrates (e.g., VDAD-AFC or VDAD-pNA) and is routinely tested for its ability to enzymatically cleave these two substrates Ac-VDAD-pNA or Ac-VDAD-AFC.
<b>Quantity</b>	25 units
<b>Specific Activity</b>	NA
<b>Unit Definition</b>	One unit of the recombinant caspase-2 is the enzyme activity that cleaves 1 nmol of the caspase substrate VDAD-pNA (pNA: p-nitroaniline) per hour at 37°C in a reaction solution containing 50 mM HEPES, pH 7.2, 50 mM NaCl, 0.1% CHAPS, 10 mM EDTA, 5% Glycerol, and 10 mM DTT.
<b>Purity</b>	>95% by SDS-PAGE
<b>Formulation</b>	Lyophilized powder
<b>Reconstitution</b>	The active recombinant caspases can be reconstituted to 0.1-1 unit per µl in PBS or - for longer stability - in PBS containing 15% glycerol or the Reaction Buffer described above (also available separately from PromoKine, Cat. No. PK-CA577-1068-20 and PK-CA577-1068-80). We recommend using 1 unit per assay for analyzing caspase activity.
<b>Storage</b>	The lyophilized caspase-2 is stable for 1 year at -70°C. Following reconstitution in PBS + 15% glycerol, the enzyme should be aliquoted and immediately stored at -70°C. Avoid multiple freeze/thaw cycles as activity might decrease.
<b>Applications</b>	Active caspase-2 is useful in studying enzyme regulation, determining target substrates, screening caspase inhibitors, or as a positive control in caspase activity assays. We recommend using 1 unit/assay for analyzing caspase activity. For a complete caspase-2 assay protocol, please refer to PromoKine's Caspase-2 Fluorometric or Colorimetric Assay Kits.

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