

## Instruction Manual

<b>Catalog Number</b>	PK-RP577-K241
<b>Components</b>	Active Recombinant Caspase-1, 25 units Active Recombinant Caspase-4, 25 units Active Recombinant Caspase-5, 25 units
<b>Description</b>	The caspase family consists of more than 10 members. Based on their extended substrate specificities, these enzymes were divided into three major groups: Group I (contains caspase-1,-4,-5), Group II (contains caspase-2,-3,-7), and Group III (contains caspase-6,-8,-9,-10). Evidences have suggested that Group I caspases are involved primarily in the production of inflammatory cytokines, while group II and III enzymes function in apoptosis as effectors and upstream activators, respectively. The group I caspases were expressed in E. coli and routinely tested for their ability to enzymatically cleave the substrate YVAD-pNA (for caspase-1) and WEHD-pNA (for caspase-4 & -5).
<b>Quantity</b>	3 x 25 units
<b>Unit Definition</b>	One unit of the active recombinant caspase-1,-4,-5 is the enzyme activity that cleaves 1 nmol of the caspase substrate YVAD-pNA (for caspase-1) and WEHD-pNA (for caspase-4 & -5), respectively, 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>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 recombinant caspases are stable for 1 year at -70°C. Following reconstitution in PBS, enzymes should be aliquoted and immediately stored at -70°C. Avoid multiple freeze/thaw cycles as activity might decrease.
<b>Applications</b>	Active recombinant caspases are useful in screening caspase inhibitors, studying enzyme kinetics and regulation, determining target substrates, and as positive controls in caspase activity assays and Western blot analysis. We recommend using 1 unit per assay for analyzing caspase activity. For a complete caspase activity assay protocol, please refer to PromoKine's Fluorometric or Colorimetric Caspase Assay Kits.

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