

Instruction Manual

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| Catalog Number | PK-RP577-1087-25 |
| Description | Caspase-7 (also known as Mch3, ICE-LAP3, CMH-1) is a member of the caspase-family of cysteine proteases. Similar to other caspases, caspase-7 also exists in cells as an inactive proenzyme. During apoptosis procaspase-7 is processed at aspartate residues by self-proteolysis and/or cleavage by another caspase. The processed active form of caspase-7 consists of large and small subunits which associate to form the active enzyme. Active caspase-7 has been shown involving in the proteolysis of PARP (poly ADP-ribose polymerase), an enzyme that is involved in DNA repair and genomic maintenance. The recombinant active human caspase-7 was expressed in <i>E. coli</i> . The active caspase-7 is routinely tested for its ability to enzymatically cleave these two substrates Ac-DEVD-pNA or Ac-DEVD-AFC. |
| Quantity | 25 units |
| Specific Activity | 25,000 units/mg |
| Unit Definition | One unit of the recombinant caspase-7 is the enzyme activity that cleaves 1 nmol of the caspase substrate DEVD-pNA (pNA: p-nitroanaline) 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. |
| Purity | >90% by SDS-PAGE |
| Formulation | Lyophilized or semi-dry powder. |
| Reconstitution | 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. |
| Storage | The lyophilized caspase-7 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. |
| Applications | Active caspase-7 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-7 assay protocol, please refer to PromoKine's Caspase Fluorometric or Colorimetric Assay Kits. |

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