# Caspase-9, human, recombinant

PromoKine

## Instruction Manual

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| **Catalog Number** | PK-RP577-1089-25 |
| **Description** | Caspase-9 is a member of the caspase-family of cysteine proteases. Similar to other caspases, caspase-9 also exists in cells as an inactive proenzyme. During the initiation of apoptosis procaspase-9 is processed at aspartate residues to form active caspase-9. As one of the initiator caspases, active caspase-9 functions to trigger activation of downstream effector caspases, leading to disassembly of cell structures. The recombinant active human caspase-9 was expressed in E. coli. The active caspase-9 is routinely tested for its ability to enzymatically cleave these two substrates Ac-LEHD-pNA or Ac-LEHD-AFC. |
| **Quantity** | 25 units |
| **Specific Activity** | 400 units/mg |
| **Unit Definition** | One unit of the recombinant caspase-9 is the enzyme activity that cleaves 1 nmol of the caspase substrate LEHD-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-9 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-9 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-9 assay protocol, please refer to PromoKine's Caspase-9 Fluorometric or Colorimetric Assay Kits. |

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PromoCell GmbH
Sickingenstr. 63/65
69126 Heidelberg
Germany

North America 1 – 866 – 251 – 2860 (toll free)
Deutschland 0800 – 776 66 23 (gebührenfrei)
France 0800 90 93 32 (ligne verte)
United Kingdom 0800 – 96 03 33 (toll free)
Other Countries +49 6221 – 649 34 0

Email: info@promokine.info
www.promokine.info