ProductInformation

ANTI-CASPASE 7
Developed in Rabbit
Affinity Isolated Antibody

Product Number **C7724**

Product Description

Anti-Caspase 7 is developed in rabbit using a synthetic peptide KPDRSSFVPSLFSKKKKN-C corresponding to the N-terminal region of caspase 7 (amino acid residues 25-42 with C-terminal added cysteine) conjugated to maleimide-activated BSA as immunogen. The peptide also corresponds to amino acid residues 2-19 of the human enzyme p20 subunit. The antibody is affinity-purified using the immunogen peptide immobilized on agarose.

Anti-Caspase 7 recognizes a 35 kD band corresponding to the caspase 7 precursor by immunoblotting. Staining of caspase 7 band is specifically inhibited with the immunizing peptide. An additional weak band, representing a caspase 7 degradation product, may be detected in some cell line extracts.

Caspases are a family of intracellular cysteine proteases that cleave their substrates after aspartic acid residues. They form an intricately regulated protease network which plays an essential role in apoptosis.[1,2] Procaspase 7 (Mch3, ICE–Lap3, CMH-1), a member of the ICE/ced-3 subfamily, is an inactive proenzyme that is activated by proteolytic cleavage at specific aspartic acid residues. During cleavage, the N-terminal short prodomain is removed, and the proenzyme is converted into the active form consisting of a large (p20) and a small (p11) subunit.[3,4,5] Caspase 7 has alternative transcripts coding for two long (active) and a short (inactive) enzyme. Together with caspases 3 and 6, it is classified as an effector/executioner caspase. Overexpression of caspase 7 long form without the prodomain can induce apoptosis. The short form may inhibit the activity of the long form. mRNA of human caspase 7 is widely expressed in all tissues except brain. Compartmentalization of caspase 7 in the cytoplasmic reticulum and mitochondria has been reported.[6] Caspase 7 is cleavable by caspase 3, caspase 9, caspase 10 and granzyme B. Active caspase 7 can cleave the DNA repair enzyme PARP, sterol regulatory element binding proteins (SREBPs), DNA fragmentation factor, and other proteins including T cell receptor zeta chain and the kinesin receptor kinectin. Caspase 7 may be involved to a certain extent in the induction of cytochrome-C release from mitochondria in the presence of cytosol.[7]

Reagents

Anti-Caspase 7 is supplied as affinity isolated antibody in 0.01 M phosphate buffered saline, pH 7.4, containing 1% BSA and 15 mM sodium azide (see MSDS)* as a preservative.
Protein concentration is approximately 1 mg/ml by absorbance at 280 nm.

Precautions and Disclaimer

* Due to the sodium azide content a material safety sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazardous and safe handling practices.

Storage/Stability

For continuous use, store at 2-8°C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. Storage in "frost-free" freezers is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

A minimum working dilution of 1:1,000 is determined by immunoblotting using a whole extract of a Jurkat human T-cell leukemia cell line.

Note: In order to obtain best results and assay sensitivity in different techniques and preparations we recommend determining optimal working dilutions by titration test.

References

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5. Lippke, J.A., et al., J. Biol. Chem., **271**,1825 (1996).
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7. Bossy-Wetzel, E., and Green, D.R., J. Biol. Chem., **274**, 17484 (1999).

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