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Diagnostik & molekulare Diagnostik



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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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Caspase-3 . Rabbit Polyclonal Antibody

BACKGROUND

Caspase-3 along with caspase 7 and 6 form the group of effector caspases that are responsible for the cleavage of multiple substrates including the cytokeratins, PARP, alpha fodrin, NuMA and others. Caspase-7 occurs in three variant forms. Caspase-3-like activities are required for Fas-mediated apoptosis. However, the role of caspase-1 and caspase-3 in mediating Fas-induced cell death is not clear. Although wild-type, caspase-1(-/-), and caspase-3(-/-) hepatocytes were killed at a similar rate when cocultured with FasL expressing NIH 3T3 cells, caspase -3(-/-) hepatocytes displayed drastically different morphological changes as well as significantly delayed DNA fragmentation. For both wild-type and caspase-1 (-/-) apoptotic hepatocytes, typical apoptotic features such as cytoplasmic blebbing and nuclear fragmentation are seen within 6 hr, but neither event was observed for caspase-3(-/-) hepatocytes. In thymocytes apoptotic caspase-3 (-/-) thymocytes exhibit similar abnormal morphological changes and delayed DNA fragmentation observed in hepatocytes. Cleavage of various caspase substrates implicates apoptotic events, including gelsolin, fodrin, laminB, and DFF45/ICAD are delayed or absent. The altered cleavage of these key substrates is likely responsible for the aberrant apoptosis observed in both hepatocytes and thymocytes deficient in caspase-3.

IMMUNOGEN

Full length recombinant caspase-3 protein

POSITIVE CONTROL/TISSUE EXPRESSION

COMMENTS

Applications: western blot, use at 2-10 µg/ml

ORDERING INFORMATION

CATALOG NUMBER

A130P

SIZE

100 µg

FORM

Unconjugated

HOST/CLONE

Rabbit

FORMULATION

Provided as solution in phosphate buffered saline, pH 7.3, with 1.0 mg/ml BSA and 0.05% sodium azide

CONCENTRATION

See vial for concentration

ISOTYPE

IgG

APPLICATIONS

Western Blot

SPECIES REACTIVITY

Human

ACCESSION NUMBER

P42574, Human

PURIFICATION

Ammonium Sulfate Precipitation

SHIP CONDITIONS

room temperature

STORAGE CUSTOMER

Product should be stored at -20°C. Aliquot to avoid freeze/thaw cycles

STABILITY

Products are stable for one year from purchase when stored properly

REFERENCES

1] Ordering the cytochrome c-initiated caspase cascade: hierarchical activation of caspases-2, -3, -6, -7, -8, and -10 in a caspase-9-dependent manner. Slee EA; Harte MT; Kluck RM; Wolf BB; Casiano CA; Newmeyer DD; Wang HG; Reed JC; Nicholson DW; Alnemri ES; Green DR; Martin SJ. *J Cell Biol*, 144(2):281-92 1999 Jan 25

2] Redox regulation of caspase-3(-like) protease activity: regulatory roles of thioredoxin and cytochrome c. Ueda S; Nakamura H; Masutani H; Sasada T; Yonehara S; Takabayashi A; Yamaoka Y; Yodoi J. *J Immunol*, 161(12):6689-95 1998 Dec 15

3] Presence of a pre-apoptotic complex of pro-caspase-3, Hsp60 and Hsp10 in the mitochondrial fraction of jurkat cells. Samali A; Cai J; Zhivotovsky B; Jones DP; Orrenius S. *EMBO J*, 18(8):2040-8 1999 Apr 15