SANTA CRUZ BIOTECHNOLOGY, INC.

caspase-6 (6CSP02): sc-81659

BACKGROUND

A unique family of cysteine proteases has been described that differs in sequence, structure and substrate specificity from any previously described protease family. This family, termed Ced-3/caspase-1, is comprised of caspase-1, caspase-2, caspase-3, caspase-4, caspase-6 and caspase-7 (also designated Mch3, ICE-LAP3 or CMH-1), caspase-9 and caspase-10. Ced-3/caspase-1 family members function as key components of the apoptotic machinery and act to destroy specific target proteins which are critical to cellular longevity. Poly (ADP-ribose) polymerase plays an integral role in surveying for DNA mutations and double strand breaks. Caspase-3, caspase-7 and caspase-9, but not caspase-1, have been shown to cleave the nuclear protein PARP into an apoptotic fragment. Caspase-6, but not caspase-3, has been shown to cleave the nuclear lamins which are critical to maintaining the integrity of the nuclear envelope and cellular morphology. Caspase-10 has been shown to activate caspase-3 and caspase-7 in response to apoptotic stimuli.

REFERENCES

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3. Fernandes-Alnemri, T.F., et al. 1996. *In vitro* activation of CPP32 and Mch3 by Mch4, a novel human apoptotic cysteine protease containing two FADD-like domains. Proc. Natl. Acad. Sci. USA 93: 7464-7469.
4. Takahashi, A., et al. 1996. Cleavage of Lamin A by Mch2A but not CPP32: multiple interleukin-1β-converting enzyme-related proteases with distinct substrate recognition properties are active in apoptosis. Proc. Natl. Acad. Sci. USA 93: 8395-8400.
5. Duan, H., et al. 1996. ICE-LAP6, a novel member of the ICE/Ced-3 gene family, is activated by the cytotoxic T cell protease granzyme B. J. Biol. Chem. 271: 16720-16724.
6. Simbulan-Rosenthal, C.M., et al. 1996. The expression of poly (ADP-ribose) polymerase during differentiation-linked DNA replication complex. Biochemisrty 35: 11622-11633.
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CHROMOSOMAL LOCATION

Genetic locus: CASP6 (human) mapping to 4q25.

SOURCE

caspase-6 (6CSP02) is a mouse monoclonal antibody raised against the prodomain of caspase-6 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

caspase-6 (6CSP02) is recommended for detection of caspase-6 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for caspase-6 siRNA (h): sc-72802, caspase-6 shRNA Plasmid (h): sc-72802-SH and caspase-6 shRNA (h) Lentiviral Particles: sc-72802-V.

Molecular Weight of caspase-6: 34 kDa.

Positive Controls: Jurkat + PMA cell lysate: sc-24718, Jurkat whole cell lysate: sc-2204 or Jurkat + staurosporine cell lysate: sc-24719.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.