SANTA CRUZ BIOTECHNOLOGY, INC.

caspase-5 p20 (D-18): sc-8507

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Caspases are cysteine proteases which play important roles in the activation of cytokines and in apoptosis. The ICE subfamily of caspases comprises peptides closely related to caspase-1, which promotes maturation of interleukin IL-1β and interleukin-18 (IL-18) by proteolytic cleavage of precursor forms to generate biologically active peptides. Both caspase-4 and caspase-5 are members of the caspase-1 subfamily, and are more closely related to each other than to other homologues. Caspase-5 (also designated ICErel-III, TY, ICH-3 and caspase-12 in mouse), can cleave its own precursor, an activity that requires the cysteine 245 residue. Frameshift mutations in caspase-5 have been identified in MMP tumors of the endometrium, colon, and stomach, indicating the caspase-5 may be a new target gene in the microsatellite mutator pathway for cancer. The human caspase 5 gene maps to chromosome 11q22.3 and encodes a protein whose expression is barely detectable in most tissues except brain, with highest expression levels being found in lung, liver and skeletal muscle.

REFERENCES

1. Munday, N.A., et al. 1995. Molecular cloning and pro-apoptotic activity of ICErelII and ICErelIII, members of the ICE/CED-3 family of cysteine proteases. J. Biol. Chem. 270: 15870-15876.
2. Faucheu, C., et al. 1996. Identification of a cysteine protease closely related to interleukin-1β-converting enzyme. J. Biochem. 236: 207-213.
3. Cohen, G.M. 1997. Caspases: the executioners of apoptosis. Biochem. J. 326: 1-16.
4. Van de Craen, M., et al. 1997. Characterization of seven murine caspase family members. FEBS Lett. 403: 61-69.
5. Schwartz, S. Jr., et al. 1999. Frameshift mutations at mononucleotide repeats in caspase-5 and other target genes in endometrial and gastrointestinal cancer of the microsatellite mutator phenotype. Cancer Res. 59: 2995-3002.

CHROMOSOMAL LOCATION

Genetic locus: CASP5 (human) mapping to 11q22.3.

SOURCE

caspase-5 p20 (D-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of caspase-5 p20 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-8507 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

caspase-5 p20 (D-18) is recommended for detection of p20 subunit and precursor of caspase-5 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for caspase-5 siRNA (h): sc-72800, caspase-5 shRNA Plasmid (h): sc-72800-SH and caspase-5 shRNA (h) Lentiviral Particles: sc-72800-V.

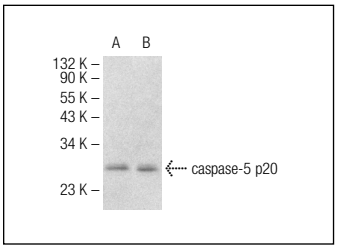
Molecular Weight of caspase-5 p20 isoforms 1/2/4/5/6: 50/43/13/51/42 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204 or Hep G2 cell lysate: sc-2227.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



caspase-5 p20 (D-18): sc-8507. Western blot analysis of caspase-5 p20 expression in Jurkat (**A**) and Hep G2 (**B**) whole cell lysates.

RESEARCH USE

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