

caspase-5 p20 (H-2): sc-393346

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 1 β (IL-1 β) 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.

CHROMOSOMAL LOCATION

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

SOURCE

caspase-5 p20 (H-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 120-153 at the N-terminus of caspase-5 p20 of human origin.

PRODUCT

Each vial contains 200 μ g IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-393346 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

caspase-5 p20 (H-2) is recommended for detection of caspase-5 precursor and p20 subunit of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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: 50/43 kDa.

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

Positive Controls: HeLa whole cell lysate: sc-2200, K-562 whole cell lysate: sc-2203 or Jurkat whole cell lysate: sc-2204.

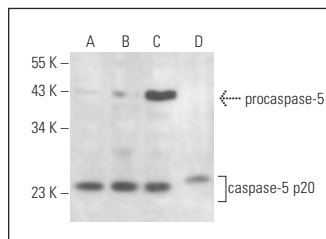
RESEARCH USE

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

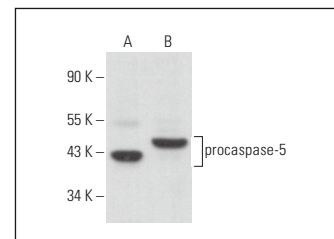
STORAGE

Store at 4 $^{\circ}$ C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



caspase-5 (H-2): sc-393346. Western blot analysis of caspase-5 expression in Jurkat (A), K-562 (B), Raji (C) and HeLa (D) whole cell lysates.



caspase-5 (H-2): sc-393346. Western blot analysis of procaspase-5 expression in THP-1 (A) and SW480 (B) whole cell lysates.

SELECT PRODUCT CITATIONS

- Cheng, K.T., et al. 2017. Caspase-11-mediated endothelial pyroptosis underlies endotoxemia-induced lung injury. *J. Clin. Invest.* 127: 4124-4135.
- Ghazaryan, N., et al. 2019. The antitumor efficacy of monomeric disintegrin obtustatin in S-180 sarcoma mouse model. *Invest. New Drugs* 37: 1044-1051.
- Colley, D.G., et al. 2020. Schistosomiasis consortium for operational research and evaluation (SCORE): its foundations, development, and evolution. *Am. J. Trop. Med. Hyg.* 103: 5-13.
- Logan, S.M., et al. 2021. Inflammasome signaling could be used to sense and respond to endogenous damage in brown but not white adipose tissue of a hibernating ground squirrel. *Dev. Comp. Immunol.* 114: 103819.
- Xiong, S., et al. 2021. Interleukin-1RA mitigates SARS-CoV-2-induced inflammatory lung vascular leakage and mortality in humanized K18-hACE-2 mice. *Arterioscler. Thromb. Vasc. Biol.* 41: 2773-2785.
- Zhang, R., et al. 2022. Canonical and noncanonical pyroptosis are both activated in periodontal inflammation and bone resorption. *J. Periodontal Res.* 57: 1183-1197.
- Wu, Z., et al. 2022. Double-edged sword effect of pyroptosis: the role of caspase-1/-4/-5/-11 in different levels of apical periodontitis. *Biomolecules* 12: 1660.
- Lee, C., et al. 2024. Oxidative photocatalysis on membranes triggers non-canonical pyroptosis. *Nat. Commun.* 15: 4025.

PROTOCOLS

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