SANTA CRUZ BIOTECHNOLOGY, INC.

CPVL (N-16): sc-104179

BACKGROUND

Carboxypeptidases function as proteases and cleave single amino acids from the C-terminus of peptides or proteins. There are three main groups of carboxypeptidases, namely serine-, cysteine- and metallo-enzymes. CPVL (carboxypeptidase, vitellogenic-like), also known as HVLP (VCP-like protein), is a serine carboxypeptidase that is similar to the vitellogenic carboxypeptidase found in mosquito ovaries. Belonging to the peptidase S10 family, CPVL is expressed in myeloid cells of the immune system and is also found in spleen, kidneys, placenta and heart. CPVL contains four putative N-glycosylation sites and a serine carboxypeptidase active site. During monocyte maturation into macrophages, CPVL expression is induced. This suggests a possible role for CPVL in phagocytosis, antigen processing and organization of the innate immune response.

REFERENCES

1. Mahoney, J.A., et al. 2001. Cloning and characterization of CPVL, a novel serine carboxypeptidase, from human macrophages. Genomics 72: 243-251.
2. Stanton, L.A., et al. 2003. Immunophenotyping of macrophages in human pulmonary tuberculosis and sarcoidosis. Int. J. Exp. Pathol. 84: 289-304.
3. Sleat, D.E., et al. 2006. Identification and validation of mannose 6-phosphate glycoproteins in human plasma reveal a wide range of lysosomal and non-lysosomal proteins. Mol. Cell. Proteomics 5: 1942-1956.
4. Lee, T.H., et al. 2006. Tissue expression of the novel serine carboxypeptidase Scpep1. J. Histochem. Cytochem. 54: 701-711.
5. Mittapalli, O., et al. 2006. Characterization of a serine carboxypeptidase in the salivary glands and fat body of the orange wheat blossom midge, *Sitodiplosis mosellana (Diptera: Cecidomyiidae).* Insect Biochem. Mol. Biol. 36: 154-160.
6. Harris, J., et al. 2006. A vitellogenic-like carboxypeptidase expressed by human macrophages is localized in endoplasmic reticulum and membrane ruffles. Int. J. Exp. Pathol. 87: 29-39.

CHROMOSOMAL LOCATION

Genetic locus: CPVL (human) mapping to 7p14.3.

SOURCE

CPVL (N-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of CPVL of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-104179 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

CPVL (N-16) is recommended for detection of CPVL 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 CPVL siRNA (h): sc-89754, CPVL shRNA Plasmid (h): sc-89754-SH and CPVL shRNA (h) Lentiviral Particles: sc-89754-V.

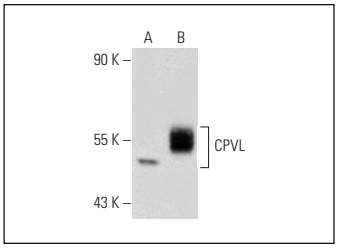
Molecular Weight of CPVL: 54 kDa.

Positive Controls: CPVL (h): 293 Lysate: sc-113149 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



CPVL (N-16): sc-104179. Western blot analysis of CPVL expression in non-transfected: sc-110760 (**A**) and human CPVL transfected: sc-113149 (**B**) 293 whole cell lysates.

RESEARCH USE

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