SANTA CRUZ BIOTECHNOLOGY, INC.

CPVL (H-7): sc-376658

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 vitellogenc 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.

CHROMOSOMAL LOCATION

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

SOURCE

CPVL (H-7) is a mouse monoclonal antibody raised against amino acids 147-193 mapping within an internal region of CPVL of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CPVL (H-7) is available conjugated to agarose (sc-376658 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-376658 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376658 PE), fluorescein (sc-376658 FITC), Alexa Fluor® 488 (sc-376658 AF488), Alexa Fluor® 546 (sc-376658 AF546), Alexa Fluor® 594 (sc-376658 AF594) or Alexa Fluor® 647 (sc-376658 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376658 AF680) or Alexa Fluor® 790 (sc-376658 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

CPVL (H-7) is recommended for detection of CPVL of human origin by Western Blotting (starting dilution 1:100, 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.

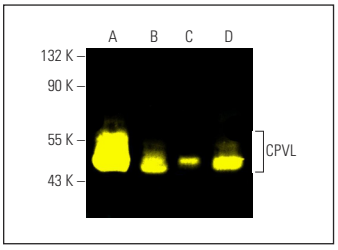
Molecular Weight of CPVL: 54 kDa.

Positive Controls: SK-BR-3 cell lysate: sc-2218, U-937 cell lysate: sc-2239 or Hep G2 cell lysate: sc-2227.

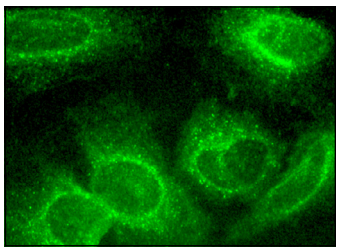
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



CPVL (H-7) Alexa Fluor® 488: sc-376658 AF488. Direct fluorescent western blot analysis of CPVL expression in Hep G2 (**A**), U-937 (**B**) and SK-BR-3 (**C**) whole cell lysates and human kidney tissue extract (**D**). Blocked with UltraCruz® Blocking Reagent: sc-516214.



CPVL (H-7): sc-376658. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Jiang, X., et al. 2023. Identifying a dynamic transcriptomic landscape of the cynomolgus macaque placenta during pregnancy at single-cell resolution. Dev. Cell 58: 806-821.e7.

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.