

VACVase (E-3): sc-514189



The Power to Question

BACKGROUND

Vase, also known as valacyclovir hydrolase, BPHL (biphenyl hydrolase-like) or MCNAA, is a 291 amino acid member of the AB hydrolase superfamily. Highly expressed in liver and kidney and weakly expressed in heart, intestine and skeletal muscle, VACVase is a serine hydrolase that functions to catalyze the hydrolytic activation of amino acid ester prodrugs and may play a role in chemical detoxification. VACVase exists as a monomer and contains a serine residue at its active site, allowing it to enzymatically hydrolyze and activate compounds such as valacyclovir (VACV), an antitherapeutic drug. VACVase is expressed in several carcinoma cell lines and, due to its enzymatic specificity, may be a potential activation target for anticancer and antiviral prodrugs. VACVase exists as two alternatively spliced isoforms designated α and β .

REFERENCES

- Puente, X.S., et al. 1995. Cloning and expression analysis of a novel human serine hydrolase with sequence similarity to prokaryotic enzymes involved in the degradation of aromatic compounds. *J. Biol. Chem.* 270: 12926-12932.
- Puente, X.S., et al. 1998. Structural characterization and chromosomal localization of the gene encoding human biphenyl hydrolase-related protein (BPHL). *Genomics* 51: 459-462.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 603156. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Kim, I., et al. 2003. Identification of a human valacyclovirase: biphenyl hydrolase-like protein as valacyclovir hydrolase. *J. Biol. Chem.* 278: 25348-25356.
- Kim, I., et al. 2004. A novel nucleoside prodrug-activating enzyme: substrate specificity of biphenyl hydrolase-like protein. *Mol. Pharm.* 1: 117-127.

CHROMOSOMAL LOCATION

Genetic locus: BPHL (human) mapping to 6p25.2; Bphl (mouse) mapping to 13 A3.3.

SOURCE

VACVase (E-3) is a mouse monoclonal antibody raised against amino acids 158-230 mapping within an internal region of VACVase of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

VACVase (E-3) is available conjugated to agarose (sc-514189 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514189 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514189 PE), fluorescein (sc-514189 FITC), Alexa Fluor® 488 (sc-514189 AF488), Alexa Fluor® 546 (sc-514189 AF546), Alexa Fluor® 594 (sc-514189 AF594) or Alexa Fluor® 647 (sc-514189 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514189 AF680) or Alexa Fluor® 790 (sc-514189 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

VACVase (E-3) is recommended for detection of VACVase of mouse, rat and 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 VACVase siRNA (h): sc-106687, VACVase siRNA (m): sc-155089, VACVase shRNA Plasmid (h): sc-106687-SH, VACVase shRNA Plasmid (m): sc-155089-SH, VACVase shRNA (h) Lentiviral Particles: sc-106687-V and VACVase shRNA (m) Lentiviral Particles: sc-155089-V.

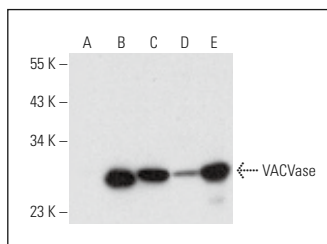
Molecular Weight of VACVase: 30 kDa.

Positive Controls: VACVase (m): 293T Lysate: sc-124534, Hep G2 cell lysate: sc-2227 or Caki-1 cell lysate: sc-2224.

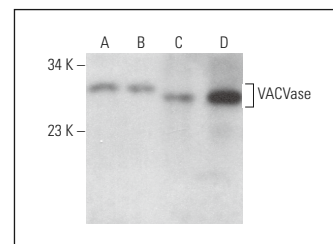
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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



VACVase (E-3): sc-514189. Western blot analysis of VACVase expression in non-transfected 293T: sc-117752 (A), mouse VACVase transfected 293T: sc-124534 (B), Hep G2 (C) and Caki-1 (D) whole cell lysates and human liver tissue extract (E).



VACVase (E-3): sc-514189. Western blot analysis of VACVase expression in Hep G2 (A) and AN3 CA (B) whole cell lysates and rat liver (C) and mouse kidney (D) tissue extracts.

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.

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