

VACVase (I-17): sc-54453

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

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2. Puente, X.S., Pendás, A.M. and López-otín, C. 1998. Structural characterization and chromosomal localization of the gene encoding human biphenyl hydrolase-related protein (BPHL). *Genomics* 51: 459-462.
3. 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/>
4. Kim, I., Chu, X.Y., Kim, S., Provoda, C.J., Lee, K.D. and Amidon, G.L. 2003. Identification of a human valacyclovirase: biphenyl hydrolase-like protein as valacyclovir hydrolase. *J. Biol. Chem.* 278: 25348-25356.
5. Kim, I., Song, X., Vig, B.S., Mittal, S., Shin, H.C., Lorenzi, P.J. and Amidon, G.L. 2004. A novel nucleoside prodrug-activating enzyme: substrate specificity of biphenyl hydrolase-like protein. *Mol. Pharm.* 1: 117-127.
6. Kim, I., Crippen, G.M. and Amidon, G.L. 2004. Structure and specificity of a human valacyclovir activating enzyme: a homology model of BPHL. *Mol. Pharm.* 1: 434-446.

CHROMOSOMAL LOCATION

Genetic locus: Bphl (mouse) mapping to 13 A3.3.

SOURCE

VACVase (I-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of VACVase of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-54453 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

VACVase (I-17) is recommended for detection of valacyclovir hydrolase precursor and mature VACVase of mouse and rat origin by Western Blotting (starting dilution 1:200, 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).

VACVase (I-17) is also recommended for detection of valacyclovir hydrolase precursor and mature VACVase in additional species, including canine and porcine.

Suitable for use as control antibody for VACVase siRNA (m): sc-155089, VACVase shRNA Plasmid (m): sc-155089-SH and VACVase shRNA (m) Lentiviral Particles: sc-155089-V.

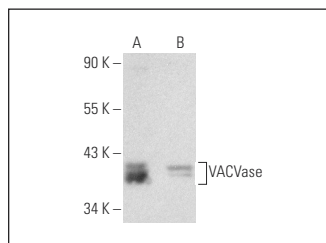
Molecular Weight of VACVase: 30 kDa.

Positive Controls: mouse kidney extract: sc-2255 or mouse liver extract: sc-2256.

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



VACVase (I-17): sc-54453. Western blot analysis of VACVase expression in mouse kidney (A) and mouse liver (B) tissue extracts.

STORAGE

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

PROTOCOLS

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