SANTA CRUZ BIOTECHNOLOGY, INC.

VACVase (m): 293T Lysate: sc-124534

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

1. Puente, X.S. and López-Otín, C. 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.
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.

PRODUCT

VACVase (m): 293T Lysate represents a lysate of mouse VACVase transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

VACVase (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive VACVase antibodies. Recommended use: 10-20 µl per lane.

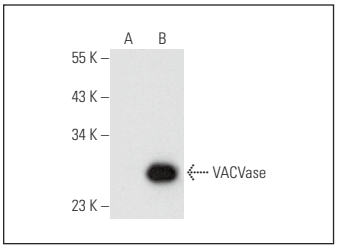
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

VACVase (E-3): sc-514189 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse VACVase expression in VACVase transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

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.

DATA



VACVase (E-3): sc-514189. Western blot analysis of VACVase expression in non-transfected: sc-117752 (**A**) and mouse VACVase transfected: sc-124534 (**B**) 293T whole cell lysates.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

RESEARCH USE

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

PROTOCOLS

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