SANTA CRUZ BIOTECHNOLOGY, INC.

VZV gE (vN-20): sc-17549

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The Power to Question

BACKGROUND

Varicella-zoster virus (VZV), also known as human herpesvirus-3 (HHV-3), is associated with two distinct diseases: childhood chickenpox (varicella) and shingles (zoster). VZV becomes dormant in sensory ganglia and may reactivate decades later to produce zoster (shingles) or herpes zoster. VZV is enveloped in the *trans*-Golgi network (TGN). Glycoprotein I (gI) is required within the TGN for VZV envelopment and for efficient membrane fusion during VZV replication. The C-terminal domain of gI is required to segregate viral and cellular proteins in enveloping TGN cisternae. The amino-terminus of mature gI is required for glycoprotein E (gE)-gI complex formation by the external domains of VZV gE and gI. gE is a major component of the virion envelope and can be found complexed with glycoprotein I on the infected host cell surface. gE expression is activated by IE4 and IE62. VZV gI is required for replication of the virus in Vero cells, for efficient replication of the virus in nonhuman cells and for normal processing of gE.

REFERENCES

1. Kimura, H., Straus, S.E. and Williams, R.K. 1997. Varicella-zoster virus glycoproteins E and I expressed in insect cells form a heterodimer that requires the N-terminal domain of glycoprotein I. Virology 2: 382-391.
2. Cohen, J.I. and Nguyen, H. 1997. Varicella-zoster virus glycoprotein I is essential for growth of virus in Vero cells. J. Virol. 9: 6913-6920.
3. Mallory, S., Sommer, M. and Arvin, A.M. 1997. Mutational analysis of the role of glycoprotein I in varicella-zoster virus replication and its effects on glycoprotein E conformation and trafficking. J. Virol. 11: 8279-8288.
4. Rahaus, M. and Wolff, M.H. 2000. Transcription factor Sp1 is involved in the regulation of varicella-zoster virus glycoprotein E. Virus Res. 1: 69-81.
5. Kleinschmidt-DeMasters, B.K. and Gilden, D.H. 2001. Varicella-zoster virus infections of the nervous system: clinical and pathologic correlates. Arch. Pathol. Lab. Med. 6: 770-780.
6. Wang, Z.H., Gershon, M.D., Lungu, O., Zhu, Z., Mallory, S., Arvin, A.M. and Gershon, A.A. 2001. Essential role played by the C-terminal domain of glycoprotein I in envelopment of varicella-zoster virus in the *trans*-Golgi network: interactions of glycoproteins with tegument. J. Virol. 1: 323-340.

SOURCE

VZV gE (vN-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of glycoprotein E of varicella-zoster virus (VZV), also designated HHV-3, 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-17549 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

VZV gE (vN-20) is recommended for detection of VZV gE of VZV/HHV-3 origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of VZV gE: 78 kDa.

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.

RESEARCH USE

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

PROTOCOLS

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