SANTA CRUZ BIOTECHNOLOGY, INC.

Varicella Zoster Virus gpII (SG2): sc-58074

BACKGROUND

Varicella Zoster Virus, known as VZV, is associated with two distinct diseases: childhood chickenpox (varicella) and shingles (zoster). Varicella Zoster Virus becomes dormant in sensory ganglia and may reactivate decades later to produce zoster (shingles) or herpes zoster. Varicella Zoster Virus is enveloped in the *trans*-Golgi network (TGN). Glycoprotein I (gI) is required within the TGN for Varicella Zoster Virus envelopment, and for efficient membrane fusion during Varicella Zoster Virus replication. The C-terminal domain of gI is required to segregate viral and cellular proteins in enveloping TGN cisternae. The N-terminus of mature gI is required for glycoprotein E (gE)-gI complex formation by the external domains of Varicella Zoster Virus 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. Varicella Zoster Virus 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 233: 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. 71: 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. 71: 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. 69: 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. 125: 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. 75: 323-340.

SOURCE

Varicella Zoster Virus gpII (SG2) is a mouse monoclonal antibody raised against Varicella Zoster Virus, Ellen strain.

PRODUCT

Each vial contains 100 µg IgG_1 in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

Varicella Zoster Virus gpII (SG2) is recommended for detection of the carboxy region of Varicella Zoster Virus glycoprotein II (VZVgB) by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Molecular Weight of reduced Varicella Zoster Virus gpII: 62/57 kDa.

Molecular Weight of nonreduced Varicella Zoster Virus gpII: 115 kDa.

SELECT PRODUCT CITATIONS

1. Suenaga, T., Matsumoto, M., Arisawa F., Kohyama, M., Hirayasu, K., Mori, Y. and Arase, H. 2015. Sialic acids on Varicella-Zoster virus glycoprotein B are required for cell-cell fusion. J. Biol. Chem. 290: 19833-19843.

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.