Anti-Varicella Zoster Virus (VZV) gE antibody, mouse monoclonal (#9)

Product code	65-358
Size	100 µg
Storage	-20℃
Concentration	1.0 mg/ml
Buffer	PBS- with 50% glycerol
Purity	Purified IgG fraction with protein A from hybridoma cell culture medium
Immunogen	Varicella-zoster virus Oka vaccine strain
Isotype	mouse IgG2aκ
Reactivity	Reacts with gE of VZV
Special notes	N/A
Application	1. Western blotting (1/2000-1/5000) 2. Immunoprecipitation (1/100) 3. Immunofluorescence staining and Immunocytochemistry (1/50-1/100) 4. ELISA (1/5,000)
Background	Varicella Zoster Virus (VZV) is one of eight herpesviruses known to infect humans and vertebrates. VZV is known by many names, including chickenpox virus, varicella virus, zoster virus, and human herpesvirus type 3 (HHV-3). **gE is envelope glycoprotein** that binds to the potential host cell entry receptor IDE. In epithelial cells, the heterodimer gE/gI is required for the cell-to-cell spread of the virus, by sorting nascent virions to cell junctions. Once the virus reaches the cell junctions, virus particles can spread to adjacent cells extremely rapidly through interactions with cellular receptors that accumulate at these junctions. Implicated in basolateral spread in polarized cells. In neuronal cells, gE/gI is essential for the anterograde spread of the infection throughout the host nervous system. Together with US9, the heterodimer gE/gI is involved in the sorting and transport of viral structural components toward axon tips. The heterodimer gE/gI serves as a receptor for the Fc part of host IgG. Dissociation of gE/gI from IgG occurs at acidic pH. May thus be involved in anti-VZV antibodies bipolar bridging, followed by intracellular endocytosis and degradation, thereby interfering with host IgG-mediated immune responses. gE consists of 623 amino acids with 70 kDa mass. It is phosphorylated on serines within the acidic cluster. Phosphorylation determines whether endocytosed viral gE traffics to the trans-Golgi network or recycles to the cell membrane.
Data Link	UniProtKB Q9J3M8 (GE_VZVO)

Please note: All products are FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES. NOT FOR MILITARY USE.

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Data Images: 65-358 Anti-Varicella Zoster Virus (VZV) gE antibody, mouse monoclonal (#9)

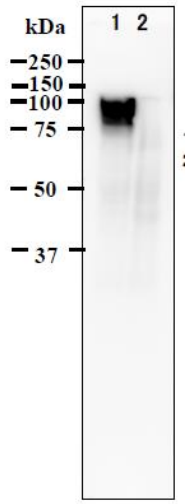

Fig.1. Identification of gE protein in VZV-infected cells by western blotting using anti-VZV gE antibody (clone #9).

Lane 1; VZV strain pOka infected MRC-5 cell lysate

Lane 2; MRC-5 cell lysate (uninfected negative control)

The anti-VZV gE antibody was used at 1/5,000 dilution.

The broad band in WB reflects multiple species of gE which are glycosylated at different levels.

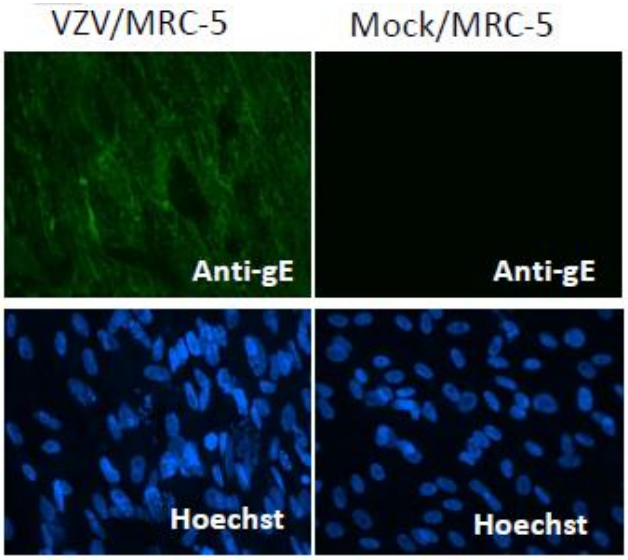

Fig.2. Immunofluorescence staining of VZV gE protein in VZV-infected MRC-5 cells by using anti-VZV gE antibody (clone #9). Anti-VZV IE62 antibody was used at 1/100 dilution. As second antibody, Alexa Fluor 488 donkey anti-mouse IgG [H+L] was used at 1/200 dilution. Nuclei were stained with Hoechst 33342.

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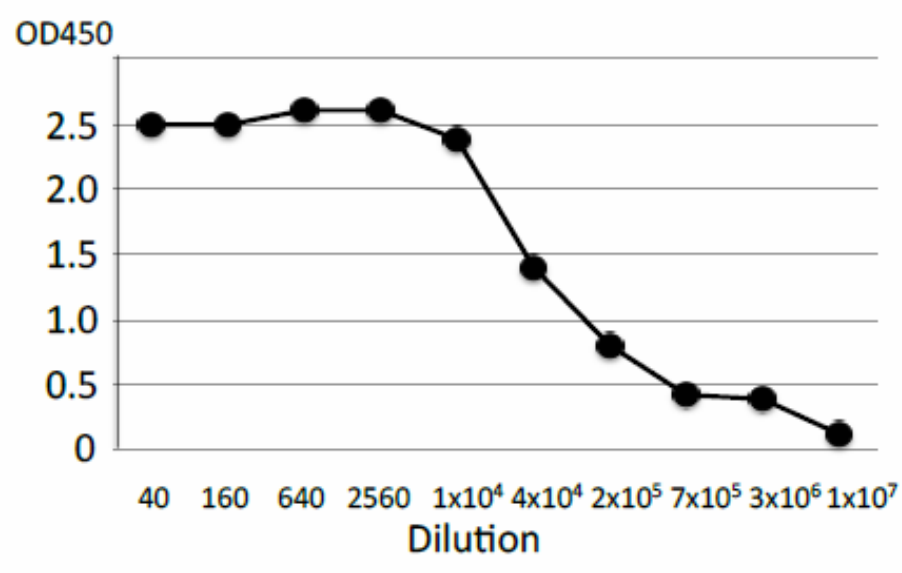

Fig.3. Titration of antibody reactivity of anti-VZV gE (#9) by indirect ELISA using lysate of VZV-infected MRC-5 cells.

VZV-lysate (100 µl, 1 µg/ml) was coated onto the wells of the plate. After blocking with 5% skim milk, 100 µl of antibody at the indicated dilution was added to the each well. HRP-conjugate goat anti-mouse IgG (100µl、x4000 dilution) was added. As substrate, OPD (ortho-phenylenediamine) was used. Optical densities (OD) measured at 450nm.

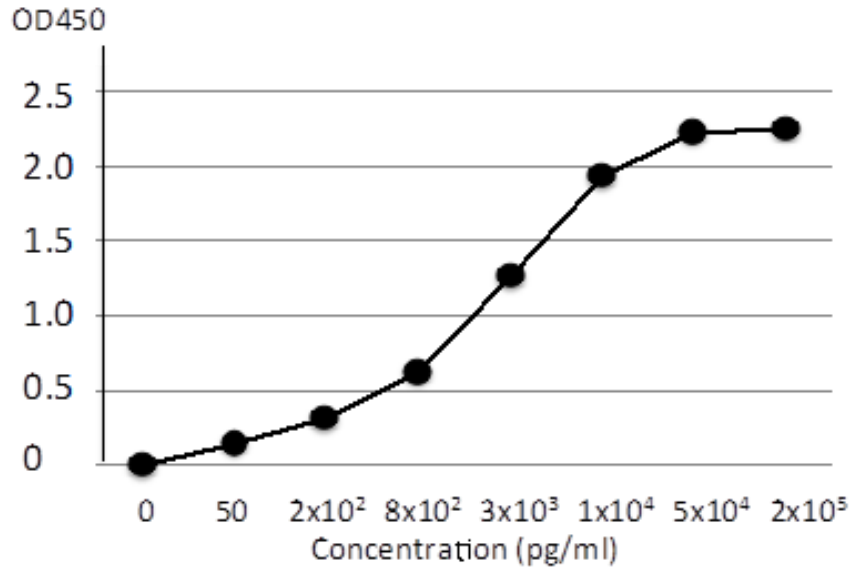

Fig.4. ELISA using anti-VZV gE (#9) monoclonal antibody.

ELISA plate is coated with indicated amounts of VZV-lysate per well. Monoclonal antibody was used at 1/5,000 dilution. ELISA was performed as in Fig.3. Dynamic range was 200 pg to 10ng under these conditions.

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Related Products:

65-350 Anti-Varicella Zoster Virus (VZV) IE62 antibody, mouse monoclonal (62A)

65-363 Anti-Varicella Zoster Virus (VZV) gH antibody, mouse monoclonal (OAKK39)

References: This antibody was used and cited in the following publications.

1.Okuno T. et al. Synthesis and processing of glycoproteins of Varicella-Zoster virus (VZV) as studied with monoclonal antibodies to VZV antigens. Virology. 1983 Sep;129(2):357-68.**WB**

2.Shiraki et al. Neutralizing anti-gH antibody of Varicella-zoster virus modulates distribution of gH and induces gene regulation, mimicking latency. J Virol. 2011 Aug;85(16):8172-80. doi: 10.1128/JVI.00435-11. **IF**

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