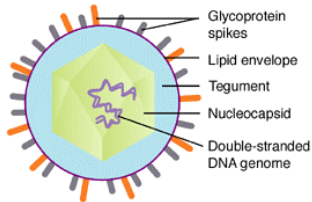


□ Cat # RP-1453 Recombinant E. Coli Varicella Zoster Virus (VZV) gE (immunodominant regions 48-153 aa) protein/antigen **Size:**100 ug



Varicella zoster virus (VZV) is one of eight herpes viruses known to infect humans and other vertebrates. It commonly causes chicken-pox in children and adults and herpes zoster (**shingles**) in adults and rarely in children.

As with the other herpesviruses, VZV causes both acute illness and lifelong latency. Before vaccination became widespread, acute primary infection (**varicella or "chickenpox"**) was common during childhood--especially in temperate climates. Primary infection is much less common in recent years as a result of childhood vaccination, but still may occur in unvaccinated individuals and in instances of vaccine failure. Varicella usually is a benign and self-limiting illness, but can be more severe in adults and in individuals with cellular immunodeficiency. These individuals are at much higher risk of pneumonia and disseminated disease with visceral involvement.

Zoster typically presents as a painful, localized cutaneous eruption occurring along 1 or more contiguous dermatomes. As with varicella, zoster usually is self-limited in the immunocompetent host, but immunocompromised persons are at risk of more severe illness with cutaneous or visceral dissemination. Pain is a frequent complication of zoster, and pain that persists following complete healing of cutaneous lesions, referred to as post-therapeutic neuralgia, can be debilitating and difficult to control.

Humans are the only known natural hosts of VZV. Transmission of VZV occurs through direct contact with infectious lesions or by inoculation of aerosolized infected droplets onto a susceptible mucosal surface. The virus is transmitted easily; the rate of secondary cases of varicella in susceptible household contacts typically exceeds 90%. Infectivity usually begins 1-2 days before the onset of rash, and patients remain infectious until all vesicular lesions are dried and crusted. In the immunocompetent host, the period of infectiousness is usually 5-7 days after the lesions first appear. In immunocompromised patients, however, healing can be slow and patients may remain infectious for up to several weeks.

VZV genome is a linear duplex DNA molecule, a laboratory strain has 124 Kb. VZV virions are spherical and 180–200 nm in diameter. Their lipid envelope encloses the 100 nm nucleocapsid of 162 hexameric and pentameric capsomeres arranged in an icosahedral form. VZV is closely related to the herpes simplex viruses (HSV), sharing much genome homology. The known envelope glycoproteins (gB, gC, gE, gH, gI, gK, gL) correspond with those in HSV; however, there is no equivalent of HSV gD. There are at least five clades of this virus. Clades 1 and 3 include European/North American strains; clade 2 are Asian strains, especially from Japan; and clade 5 appears to be based in India. Clade 4 includes some strains from Europe but its geographic origins need further clarification.

VZV vaccines: Varivax (Merck) is a chickenpox vaccine for children, adolescents and adults. Zostavax is a more concentrated formulation of the Varivax vaccine, designed to elicit an immune response in older adults whose immunity to VZV wanes with advancing age.

Source of Antigen

The recombinant protein is produced in E.Coli as a GST-tag (at C-terminus, 48-135 aa, ~35 kda, >95%) fusion protein with VZV gE immunodominant regions. The protein is purified by proprietary chromatographic technique and is supplied in buffer containing 25mM Tris pH 7.2, 1mM EDTA and 50% glycerol.

Storage

Short-term: unopened, undiluted liquid vials at 2-8 oC.

Long-term: at –20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Specificity: This antigen is immunoreactive with sera of VZV-infected individuals.

Applications: Varicella Zoster antigen is suitable for ELISA and Western blots.

Stability: 6-12 months at –20oC or below. Avoid repeated freeze and thaw

General References: Weller, T.H. (1979) American Public Health Associations, Inc. Washington D.C., pp 375-398; Drew, W.L., et al., (1980) Am. J. Clin. Pathol., 73:699-701; Davison et al., (1986), "New common nomenclature for glycoprotein gene of varicella-zoster virus and their glycosylated products", J. Virol., 57:1195-1197.

*This product is for in vitro research use only.

Related items from ADI...

Catalog# Prod Description

VZV11-M Monoclonal Varicella Zoster Virus (VZV/chickenpox) antigens IgG (pan, recognizes several VZV proteins)

VZV12-M Monoclonal Varicella Zoster Virus (VZV/chickenpox) nucleocapsid (155 kda protein) IgG

VZV13-M Monoclonal Varicella Zoster Virus (VZV/chickenpox) early gene 62 (175 kda) protein) IgG

VZV14-M Monoclonal Varicella Zoster Virus gp1/IV (VZV/chickenpox) glycoprotein I/IV protein) IgG

VZV15-N-500 Varicella Zoster Virus (VZV/chickenpox) antigens/proteins (VZ-10/MRC)

VZV16-N-500 Varicella Zoster Virus (VZV/chickenpox) antigens/proteins (Rod Ellen/Vero cells)530-140-MMM Mouse Anti-Measles IgM ELISA kit, 96 tests, Quantitative

520-200-HVG Human Anti-Varicella Zoster Virus (VZV/chickenpox) IgG ELISA, 96 tests, Quantitative

520-210-HVM Human Anti-Varicella Zoster Virus (VZV/chickenpox) IgM ELISA, 96 tests, Quantitative

520-220-HVG Human Anti-Varicella Zoster Virus (VZV/chickenpox) IgA ELISA, 96 tests, Quantitative

RP-1453-VZV-gE

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