

Recombinant VZV Glycoprotein E (gE), Flag Tag

Product description

Varicella-zoster virus (VZV) is a highly contagious α -herpes virus that infects only humans in nature ^[1]. Primary VZV infection usually occurs in early childhood, causes chickenpox, and forms a lifelong latent infection in neurons in the trigeminal ganglia and dorsal root ganglia ^[2], while in adulthood it is prone to shingles ^[3]. VZV is prevalent worldwide, but there is some variation in incidence between temperate and most tropical regions. Clinical infection with VZV not only causes varicella or shingles, but also may lead to many complications such as stromal keratitis and cerebrovascular stroke ^[1], and even life-threatening in severe cases.

VZV is an elliptical particle with a diameter of about 150 ~ 200nm, and the genome is enclosed by a 20-hedral nucleocapsid. The VZV gene is a linear double-stranded DNA molecule approximately 125,000 bp in length that encodes at least 71 open reading frames (ORFs) and associated promoter sequences ^[4]. The VZV nucleocapsid is composed of 162 shell particles with a lipoprotein envelope outside the shell, and a total of 9 glycoproteins on the envelope, namely gE, gI, gC, gH, gL, gB, gK, gM and gN. Among them, gE is encoded by ORF68, the main viral structural protein, a key protein for VZV replication and viral assembly, responsible for mediating the transmission of the virus between cells; gI is encoded by ORF67 and is usually used as a chaperone protein for gE in heterodimeric gE/gI complexes, present in infected cells ^[5].

This product is a high-purity gE recombinant protein that carries a Flag tag at the C-terminal and has a molecular weight of 60.2 kDa. Due to glycosylation effects, this protein migrates to 54-69 kDa under non-reducing (NR) conditions (SDS-PAGE). More detailed parameters of Recombinant VZV Glycoprotein E (gE), Flag Tag are shown in Table 1.

Name	Recombinant VZV Glycoprotein E (gE), Flag Tag
Nature	Recombinant
expression system	HEK293
Purity	> 95% by SDS-PAGE and >90%HPLC analyses.
Endotoxin level	< 1.0 EU/ μ g determined by LAL method.
Predicted Molecular Mass	60.2 kDa

SDS-PAGE	54-69 kDa, under non-reducing (NR) condition (SDS-PAGE) due to glycosylation.
Tags	Flag-tag on C-terminus.
State	Liquid
Formulation	Lyophilized from 0.22 µm filtered solution in PBS, pH7.4.
Concentration	1 mg/mL
Sequence	The sequence cannot be shared.

Table 1 Detailed parameters of Recombinant VZV Glycoprotein E (gE), Flag Tag.

Reference:

[1] Laing K, Ouwendijk W J D, Koelle D M, et al. Immunobiology of Varicella-Zoster Virus Infection[J]. J Infect Dis Med, 2018; 218

[2] Gershon A A, Breuer J, Cohen J I, et al. Varicella zoster virus infection[J]. Nat Rev Dis Primers, 2015: 15-16

[3] Gabutti G, Bolognesi N, Sandri F, et al. Varicella zoster virus vaccines: an update[J]. Immunotargets Ther. 2019; 8: 15-28

[4] Daniel D, Tomohiko S, Werner O. Molecular Aspects of Varicella-Zoster Virus Latency[J]. Viruses, 2018; 10 (7) : 349

[5] Grose C. The Predominant Varicella- zoster Virus gE and gI Glycoprotein Complex[M]// Structure-Function Relationships of Human Pathogenic Viruses. Springer US, 2002

Components and storage conditions

Components	P2006-100 µg	P2006-1000 µg
Recombinant VZV Glycoprotein E (gE), Flag Tag	100 µL	2*500 µL
Store the components dry at -80°C for 18 months. Please avoid freeze-thaw cycles.		

Experimental manipulation

- Before use, centrifuge 8,000-12,000 g for 10-30 seconds to aggregate proteins attached to the cap or wall of the tube at the bottom of the tube.

2. Configure working fluid: select a suitable solvent for dilution and configure the concentration of working fluid. For the best working concentration, please refer to the relevant literature by yourself, or explore and optimize it through experiments according to the purpose of the experiment and specific cells and animals.

Notes

1. This product is for scientific use only.



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