Data Sheet (Cat.No.TMPK-01192)

TargetMol

Varicella-zoster virus (strain Oka vaccine) Envelope glycoprotein E Protein (His)

General Information

Synonyms:	Envelope glycoprotein E;ORF68;gE
Protein Construction:	Ser31-Tyr538
Species:	Varicella-zoster virus (strain Oka vaccine)
Expression Host:	HEK293 Cells
Accession:	Q9J3M8
Molecular Weight:	58.39 kDa (predicted). Due to glycosylation, the protein migrates to 65-85 kDa based on Tris-Bis PAGE result.

QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 95% as determined by Tris-Bis PAGE; > 95% as determined by HPLC
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS (pH 7.4). Typically, 8% trehalose is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

VZV glycoprotein E (gE) is most abundantly expressed on the surface of infected cells, and is an essential component for virus replication and cell-to-cell transmission. It is also the main target of virus-specific antibodies and T cell responses that is often selected as vaccine candidate antigen.

Reference

Xue W, et al. Baculovirus Display of Varicella-Zoster Virus Glycoprotein E Induces Robust Humoral and Cellular Immune Responses in Mice. Viruses. 2022 Aug 16;14(8):1785. doi: 10.3390/v14081785. PMID: 36016407; PMCID: PMC9416595.

Levin MJ, Weinberg A. Immune responses to zoster vaccines. Hum Vaccin Immunother. 2019;15(4):772-777. doi: 10.1080/21645515.2018.1560918. Epub 2019 Jan 24. PMID: 30676834; PMCID: PMC6605864.

Olson JK, et al. Varicella-zoster virus glycoprotein gE: endocytosis and trafficking of the Fc receptor. J Infect Dis. 1998 Nov;178 Suppl 1:S2-6. doi: 10.1086/514255. PMID: 9852964.