

## **SARS-CoV-2 Spike\_HexaPro-Alpha (B.1.1.7)\_HEK**

### **Description:**

InVivo offers a recombinant form of the severe acute respiratory syndrome coronavirus (SARS-CoV-2) Spike protein Alpha variant (B.1.1.7), based on Wuhan-Hu-1-isolate (MN908947). It is produced under serum-free conditions in HEK-INV cells (InVivo proprietary optimized; human embryonic kidney, HEK293 cells). The construct contains the SARS-CoV-2 Spike protein, representing amino acid residues 1 to 1208 of the afore-mentioned annotation.

**Spike-Alpha (B.1.1.7) of SARS-COV-2 VoC-202012/01; containing mutations H69\_V70del, Y144del, N501Y, A570D, P681H, T716I, S982A, D1118H**

**Additionally, the protein contains a mutated polybasic/ furin cleavage site (682-RRAR-685 to 682-GSAS-685), and mutations F817P, A892P, A899P, A942P, K986P, V987P (HexaPro) for stabilization of the protein**, according to Hsieh *et al.* (2020). The C-terminal transmembrane domain and endodomain were replaced by a T4 trimerization site, TEV cleavage site and a C-terminal octa-His-Tag. The recombinant protein is purified using immobilized metal exchange chromatography (IMAC) and preparative SEC (for polishing).

<b>Product-ID:</b>	Spike_HexaPro-Alpha (B.1.1.7)_HEK
<b>Expression System:</b>	Mammalian; HEK
<b>Protein Accession Number:</b>	GenBank: <a href="#">QHD43416.1</a> / UniProt: <a href="#">P0DTC2</a>
<b>Amino Acids:</b>	Met1-Gln1208, modified as mentioned above
<b>Mutations:</b>	H69_V70del, Y144del, N501Y, A570D, P681H, T716I, S982A, D1118H
<b>Mature protein N-term:</b>	Gln14 (predicted)
<b>Tag:</b>	8 x His-Tag; C-terminal
<b>Expected Molecular Weight:</b>	138 kDa
<b>Formulation:</b>	Liquid, 20 mM NaPP, 300 mM NaCl pH 7.2
<b>Concentration:</b>	≥ 0.5 mg/ mL
<b>Purity:</b>	≥ 90% ( <i>via analytical CGE under reducing conditions</i> )

References: Hsieh, Ching-Lin, *et al.* "Structure-based design of prefusion-stabilized SARS-CoV-2 spikes." *Science* 369.6510 (2020): 1501-1505.

**The product is for research use or for further manufacturing only.**