

PRODUCT INFORMATION

SARS-CoV-2 Spike-Alpha (B.1.1.7)_HEK (Soluble Spike)

Description:

InVivo offers a recombinant form of the Spike protein from severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), based on Wuhan-Hu-1-isolate (MN908947), which is produced under serum-free conditions in HEK-INV cells (InVivo proprietary optimized; human embryonic kidney, HEK293 cells).

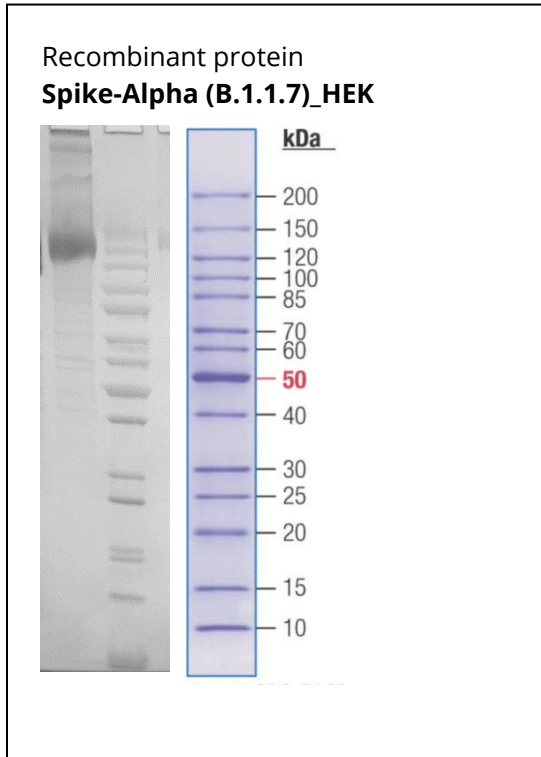
Spike-Alpha (B.1.1.7) ectodomain of SARS-COV-2 VoC-202012/01; containing mutations H69_V70del, Y144del, N501Y, A570D, P681H, T716I, S982A, D1118H

Protein design and manufacturing process is based on InVivo's Soluble Spike protein (residues 1–1213), which contains a mutated polybasic/ furin cleavage site (682-RRAR-685 to a single alanine), and mutations K986P / V987P for stabilization of the protein. The C-terminal transmembrane domain and endodomain were replaced by a TEV cleavage site, a T4 trimerization site and a C-terminal deca-His-tag. The recombinant protein is purified using immobilized metal exchange chromatography (IMAC) and preparative SEC (for polishing).

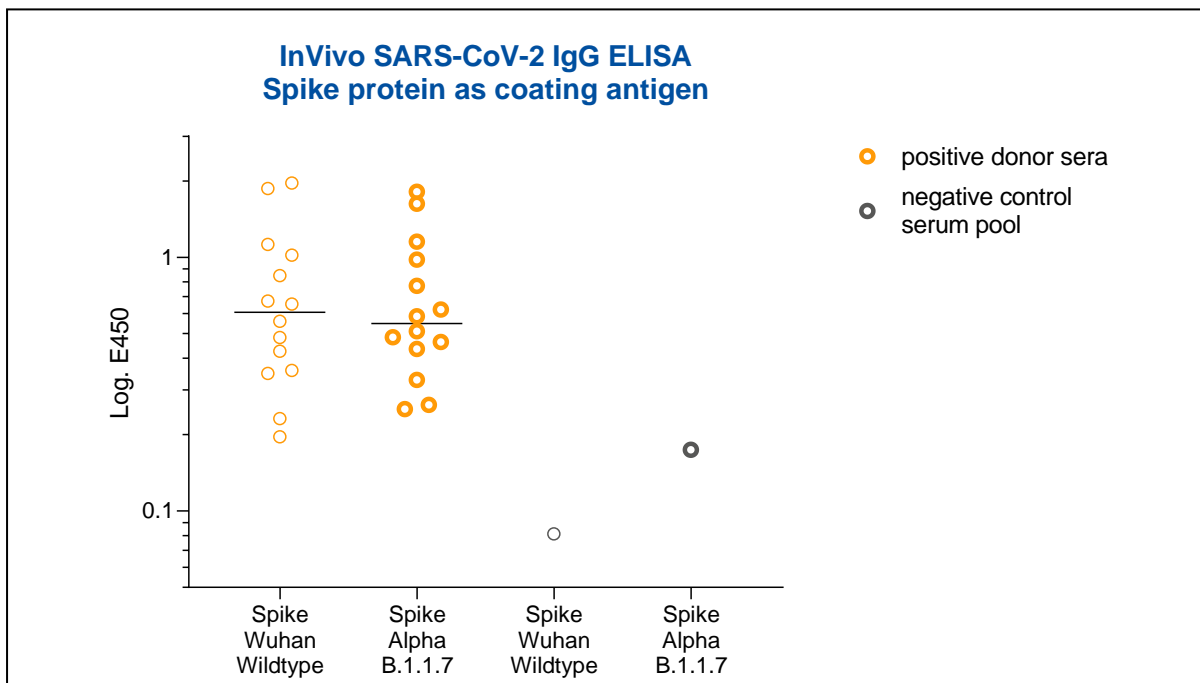
Product-ID:	Spike-Alpha (B.1.1.7)_HEK
Expression System:	Mammalian; HEK
Protein Accession Number:	GenBank: QHD43416.1 / UniProt: P0DTC2
Amino Acids:	Met1–Pro1213, modified as mentioned above
Mutations:	H69_V70del, Y144del, N501Y, A570D, P681H, T716I, S982A, D1118H
Mature Protein N-Term:	Gln14 (predicted)
Tag:	10 x His-tag; C-terminal
Expected Molecular Weight:	138 kDa (<i>glycosylated form of Soluble Spike_HEK runs at 120-200 kDa in SDS-Page</i>)
Formulation:	Liquid, 20 mM NaPP, 300 mM NaCl pH 7.2
Concentration:	≥ 0.5 mg/ mL
Purity:	≥ 90% (<i>via analytical CGE under reducing conditions</i>)

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

Protein Mass (SDS-Page, under reducing conditions):



Protein Activity (ELISA):



SARS-CoV-2 Spike proteins (Spike-Wuhan and Spike-Alpha) recombinantly expressed in HEK cells tested as solid phase bound capture antigen at 2 µg/ mL in an in-house SARS-CoV-2 IgG ELISA.

14 SARS-CoV-2 positive patient serum samples (obtained before October 2020) vs. one negative control serum pool (obtained before 2018). The line indicates the median of the absorbance values.