

Recombinant SARS-CoV-2 (C.37) Stabilized Spike Glycoprotein (Trimeric), His-Strep-Tag (HEK293)

Product Information

Cat#

HUM-341

Product Name

Recombinant SARS-CoV-2 (C.37) Stabilized Spike Glycoprotein (Trimeric), His-Strep-Tag (HEK293)

Description

SARS-CoV-2 (C.37) stabilized spike protein containing amino acid changes G75V, T76I, 246-252del, D253N, L452Q, F490S, D614G, Q675H, T859N. The protein is stabilized as a pre-fusion trimer due to six amino acid changes in the S2 portion of Spike (HexaPro). The furin cleavage site has been mutated to GSAS. SARS-CoV-2, previously known as the 2019 Novel Coronavirus (2019-nCoV), causes the pandemic COVID-19 disease.

Type

Recombinant

Gene

Spike Glycoprotein

Species

SARS-CoV-2 (C.37)

Source

HEK293

Synonyms

SARS-CoV-2 (C.37) Stabilized Spike Glycoprotein (Trimeric)

Formulation

DPBS

Notes

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This product is intended for research and manufacturing uses only. It is not a diagnostic device. The user assumes all responsibility for care, custody and control of the material, including its disposal, in accordance with all regulations.

Tags

C-terminal sheep Fc

Background

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is the virus that causes coronavirus disease 2019 (COVID-19). The sequence WIV04/2019, belonging to the GISAID S clade / PANGOLIN A lineage / Nextstrain 19B clade, is believed to be the original sequence infecting humans (Zhukova et al., 2020). However, there are many thousands of variants of SARS-CoV-2 (Koyama et al., 2020) and subtypes of the virus can be placed into much larger groupings such as lineages or clades. WHO have designated variants of concern as Alpha (United Kingdom), Beta (South Africa), Gamma (Brazil) and Delta (India), depending on location of earliest documented samples.

SARS-CoV-2 C.37 or Lambda variant was first detected in Peru in August 2020. The Lambda genome has the following amino acid mutations, all of which are in the virus's spike protein code: G75V, T76I, Δ246-252, L452Q, F490S, D614G and T859N. It has been shown to be more resistant to neutralizing antibodies compared to other strains and may be more infectious and resistant to vaccines than the Alpha and/or Gamma variants. Studies have found that sera from the Pfizer-BioNTech vaccine remain high reactivity toward the receptor binding domain (RBD) of Delta variant while it drops dramatically toward that of Lambda variant. This may be correlated with a drop in the overall titer of antibodies of Pfizer-BioNTech vaccinated individuals after 6 months. The data suggests a potential surge of Lambda variant in near future (Liu et al., 2021).
