Validation data for Spike-S1-Fc (D614G)

https://www.invivogen.com/sars2-spike-s1-proteins

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Version 20L04-NJ

Spike-S1-Fc (D614G) is a soluble SARS-CoV-2 fusion protein generated by fusing the full-length Spike S1 subunit (V16-R685) to a C-terminal human IgG1-Fc tag with a TEV (Tobacco Etch Virus) sequence linker. Spike-S1-Fc (D614G) features the D614G amino acid mutation identified early in the COVID-19 pandemic and which has rapidly become the dominant variant around the world. This fusion protein has a molecular weight of ~126 kDa on a SDS PAGE gel **(Figure 1)**. The recognition of the Spike-S1-Fc (D614G) protein by an Anti-SARS-CoV-Spike human IgM (clone CR3022) has been verified by ELISA **(Figure 2)**.

Spike-S1-Fc (D614G) purity analysis by SDS PAGE

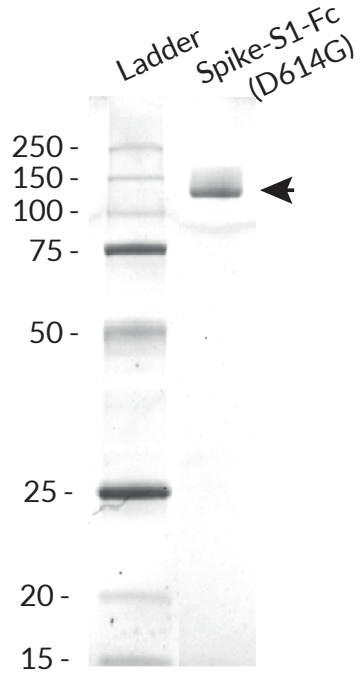

Figure 1: SDS PAGE analysis of the SARS-CoV-2 Spike-S1-Fc (D614G) protein. 1 µg of the fusion protein was loaded onto a 12% Mini-PROTEAN® TGX Stain-Free™ Precast Gel (Bio-Rad). Detection was performed as per manufacturer's instructions.

Recognition of Spike-S1-Fc (D614G) by an Anti-SARS-CoV-Spike (CR3022) human IgM

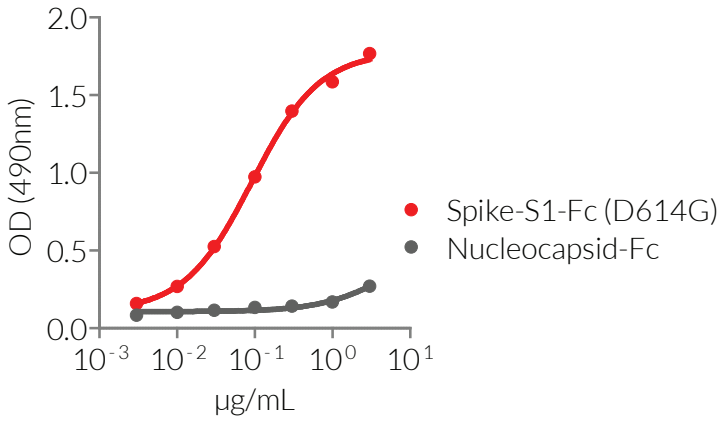

Figure 2: ELISA detection of Spike-S1-Fc (D614G) fusion protein with an Anti-SARS-CoV spike human IgM (CR3022). Anti-SARS-CoV-Spike hIgM antibody (5 µg/ml) was coated onto ELISA plates overnight. Following this, a 3-fold serial dilution of Spike-S1-Fc (D614G) (red curve) or control protein (Nucleocapsid-Fc; grey curve) were added and incubated for 1 hour. Binding was detected using a HRP-labelled anti-His antibody (1/1000 dilution) and the HRP substrate OPD (o-phenylenediamine dihydrochloride). Absorbance was read at 490 nm.

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