

## Bovine coronavirus (strain Quebec) Spike glycoprotein (His)

### General Information

Synonyms: E2;S glycoprotein;Peplomer protein

Protein Construction: 314-634 aa

Species: BCoV

Expression Host: P. pastoris (Yeast)

Accession: P25193

Molecular Weight: 36.8 kDa (predicted)

AA Sequence:

```
TVQPIADVYRRIPNLPDCNIEAWLNDKSVPSPLNWERKTFSNCNFMSSLSFIQADSFTCNNIDA AKIYGMCFSSITIDKFAIPNGR KVDLQLGNLGYLQSFNYRIDTTATSCQLYYNLP AANVSVSRFNPSTWNR RFGFTEQFVFKPQPVGVFTHHDVVYAQHCFKAPKNFCPCCKLDGSLCVGNGPGIDAGYKNSGIGTCPAGTNYLTCHNAAQCDCLCTPDPITSKSTGPYKCPQTKYLVGIGEHCSGLAIKSDYCGGNPCTCQPQAFLGWSVDSCLQGDRCNIFANFI FHDVNSGTTCCSTDLQKSNTDIILGVCVNY
```

### 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: > 90% as determined by SDS-PAGE.

Endotoxin: < 1.0 EU/μg of the protein as determined by the LAL method.

Formulation: If the delivery form is liquid, the default storage buffer is Tris/PBS-based buffer, 5%-50% glycerol. If the delivery form is lyophilized powder, the buffer before lyophilization is Tris/PBS-based buffer, 6% Trehalose, pH 8.0.

### Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in sterile deionized 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:

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

attaches the virion to the cell membrane by interacting with host receptor, initiating the infection.; mediates fusion of the virion and cellular membranes by acting as a class I viral fusion protein. Under the current model, the protein has at least three conformational states: pre-fusion native state, pre-hairpin intermediate state, and post-fusion hairpin state. During viral and target cell membrane fusion, the coiled coil regions (heptad repeats) assume a trimer-of-hairpins structure, positioning the fusion peptide in close proximity to the C-terminal region of the ectodomain. The formation of this structure appears to drive apposition and subsequent fusion of viral and target cell membranes.; Acts as a viral fusion peptide which is unmasked following S2 cleavage occurring upon virus endocytosis.

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