# Anti-S protein [P17] Bulk Size Ab03449-23.0-BT

This chimeric rabbit antibody was made using the variable domain sequences of the original Human IgG1 format for improved compatibility with existing reagents assays and techniques.

**Isotype and Format:** Rabbit IgG, Kappa
**Clone Number:** P17
**Alternative Name(s) of Target:** Spike glycoprotein; Receptor Binding Domain; SARS CoV 2 S glycoprotein; COVID-19 Spike protein; RBD; Receptor Binding Domain; S glycoprotein; SARS coronavirus 2 S protein; SARS coronavirus 2 Spike Protein; SARS CoV 2 Spike protein; SARS CoV 2; SARS-CoV-2 S protein; SARSCoV2; SARS-COV-2 S protein; SARS-COV-2 Spike glycoprotein; SARSCOV2 Spike protein; Severe acute respiratory syndrome 2 spike glycoprotein; Severe acute respiratory syndrome virus 2 spike glycoprotein; S glycoprotein; E2; Peplomer protein
**UniProt Accession Number of Target Protein:** P0DTC2
**Published Application(s):** in vivo, neutralizing, SPR, ELISA, IF
**Published Species Reactivity:** SARS-CoV-2
**Immunogen:** The original antibody was generated in the screening studies by using recombinant RBD of SARS-CoV-2 as a target against a fully human naive antibody library.
**Specificity:** The antibody binds the Spike protein of the SARS-CoV-2. The antibody does not crossreact with SARS-CoV RBD.
**Application Notes:** The specificity of the antibody was confirmed by ELISA analysis (EC50 = 29 pM). Surface plasmon resonance (SPR) assays demonstrated that the antibody bound to SARS-CoV-2 RBD with a high affinity of 96 pM. Immunofluorescence staining showed that the antibody prevented SARS-CoV-2 infection in a dosedependent manner in Vero cells. Pseudovirus neutralization assay (PSV) in Huh7 cells and standard 50% plaque reduction neutralization tests (PRNT) in Vero cells, both showed that the antibody exhibited stronger neutralizing activity with IC50 and PRNT50 values of 165 and 195 pM, respectively. The antibody conferred effective protection in animal models. The structure of the Fab fragment and a prefusion stabilized SARSCoV-2 S ectodomain trimer was characterized using single-particle cryo-EM. The antibody was employed together with H014 to develop a therapeutic antibody cocktail against SARS-CoV-2 with neutralizing properties (Yao et al., 2021; PMID: 33262452).
**Antibody First Published in:** Yao et al. Rational development of a human antibody cocktail that deploys multiple functions to confer Pan-SARS-CoVs protection. Cell Res. 2021 Jan;31(1):25-36. PMID:33262452
**Note on publication:** The original paper describes the development of a human antibody cocktail.

## Product Form

**Size:** 1 mg Purified antibody in bulk size.
**Purification:** Protein A affinity purified
**Supplied In:** PBS only.
**Storage Recommendation:** Store at 4ºC for up to 3 months. Note, this antibody is provided without added preservatives, it is therefore recommed this antibody be handled under sterile conditions. For longer

storage, aliquot and store at -20ºC.
**Concentration:** 1 mg/ml.

Important note – This product is for research use only. It is not intended for use in therapeutic or diagnostic procedures for humans or animals.