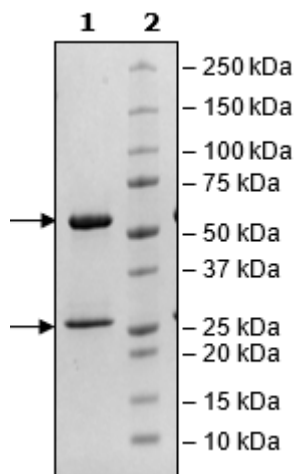


Product Information

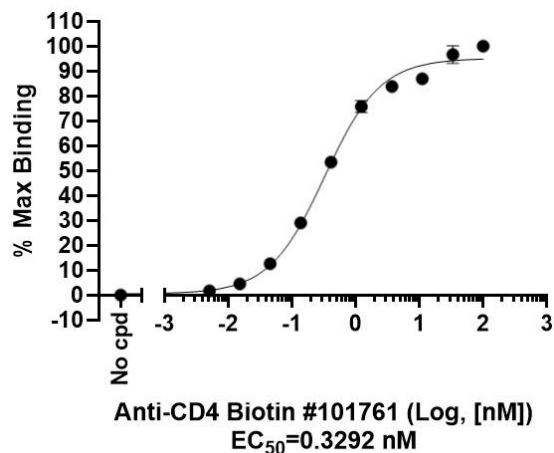
Description:	This purified recombinant antibody is a humanized mouse IgG4k anti-CD4 (cluster of differentiation 4) antibody that selectively binds to CD4. Its sequence is similar to Ibalizumab. This antibody has a C-terminal Avi-Tag™ on its heavy chain. This antibody has been tested for specific binding to human CD4 in an <i>in vitro</i> ELISA.
Background:	CD4 (cluster of differentiation 4) is part of the immunoglobulin superfamily, and it can be found in T-helper cells, monocytes, macrophages and dendritic cells. It is a co-receptor in the TCR (T-cell receptor), binding to MHC (major histocompatibility complex) class II molecules. CD4 binds to the tyrosine kinase Lck (lymphocyte-specific protein tyrosine kinase), which can phosphorylate the ITAM (immunoreceptor tyrosine activation motifs) domain of the CD3, activating CD3 related signaling. CD4 is a typical T cell marker of T helper cells, and it has been linked to cancer, autoimmune diseases such as vitiligo and type I diabetes. In addition, HIV-1 makes use of CD4 to trigger viral envelope protein conformational changes that allow cell infection. Ibalizumab, an anti-CD4 antibody, is currently used in the treatment of HIV, being considered a first-in-class medication. Further studies into CD4 and potential strategies around it may benefit patients and CD4 related diseases.
Species:	Mouse
Clonality:	Monoclonal
Concentration:	1.58 mg/ml
Expression System:	HEK293
Purity:	≥90%
Format:	Aqueous buffer solution.
Formulated In:	8 mM phosphate, pH 7.4, 110 mM NaCl, 2.2 mM KCl, and 20% glycerol
MW:	Heavy Chain: 51 kDa; Light Chain: 24 kDa + glycans
Glycosylation:	This antibody runs at a higher MW by SDS-PAGE due to glycosylation.
Label:	This antibody is enzymatically biotinylated using Avi-Tag™ technology. Biotinylation is confirmed to be ≥90%.
Stability:	At least 6 months at -80°C.
Storage:	-80°C
Instructions for Use:	Thaw on ice and gently mix prior to use. DO NOT VORTEX. Perform a quick spin before opening. Aliquot into small volumes and flash freeze for long term storage. Avoid multiple freeze/thaw cycles.
Assay Conditions:	The antibody was validated by measuring anti-CD4 binding to human CD4 antigen in ELISA. The CD4 protein (BPS Bioscience #101862) was coated onto a 96-well plate overnight at 4°C (50 µl/well at a concentration of 4 µg/ml in PBS). The plate was washed 3 times with Immuno Buffer 1 (BPS Bioscience #79311) and blocked using 100 µl of Blocking Buffer 2 (BPS Bioscience #79728) for 1 hour at room temperature. After removing the blocking buffer, 50 µl/well of purified biotinylated anti-CD4 antibody (BPS Bioscience #101761), serially diluted in Blocking Buffer 2, was added for 30 minutes at room temperature. The plate was washed and incubated with Streptavidin-HRP, washed again, and incubated with the Colorimetric HRP substrate. The reaction was stopped, and absorbance was read at 450 nm. The Blank value was subtracted from all values.
Applications:	Useful for studying the binding to CD4 in ELISA.

Quality Control Data

4-20% SDS-PAGE Coomassie Staining



CD4: Anti-CD4-Biotin Binding Assay



Biotin-Avidin Pulldown

