Biotinylated Human CD5 Protein, His,Avitag™, premium grade

Catalog # CD5-H82E5

Synonym

CD5,LEU1

Source

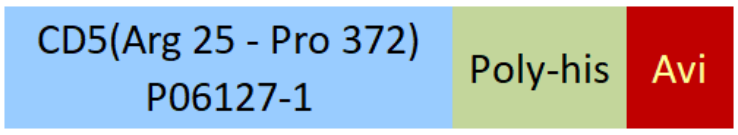
Biotinylated Human CD5, His,Avitag, premium grade(CD5-H82E5) is expressed from human 293 cells (HEK293). It contains AA Arg 25 - Pro 372 (Accession # P06127-1).

Predicted N-terminus: Arg 25

It is produced under our rigorous quality control system that incorporates a comprehensive set of tests including sterility and endotoxin tests. Product performance is carefully validated and tested for compatibility for cell culture use or any other applications in the early preclinical stage.

GMP-CD5H24 is the GMP version of this CD5-H82E5. These two proteins display indistinguishable performance profiles, thereby ensuring a seamless transition for end users from early preclinical stag to later clinical phases.

Molecular Characterization



This protein carries a polyhistidine tag at the C-terminus, followed by an Avi tag (Avitag™).

The protein has a calculated MW of 42.2 kDa. The protein migrates as 52 kDa±3 kDa when calibrated against Star Ribbon Pre-stained Protein Marker under reducing (R) condition (SDS-PAGE) due to glycosylation.

Labeling

Biotinylation of this product is performed using Avitag™ technology. Briefly, the single lysine residue in the Avitag is enzymatically labeled with biotin.

Biotinylation

As determined by Quantitative ELISA binding assay against streptavidin.

Endotoxin

Less than 0.01 EU per μg by the LAL method / rFC method.

Host Cell Protein

<0.5 ng/μg of protein tested by ELISA.

Host Cell DNA

<0.02 ng/μg of protein tested by qPCR.

Sterility

Negative

Mycoplasma

Negative.

Purity

>95% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 μm filtered solution in PBS, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

Storage

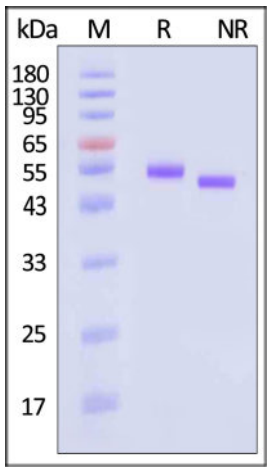
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

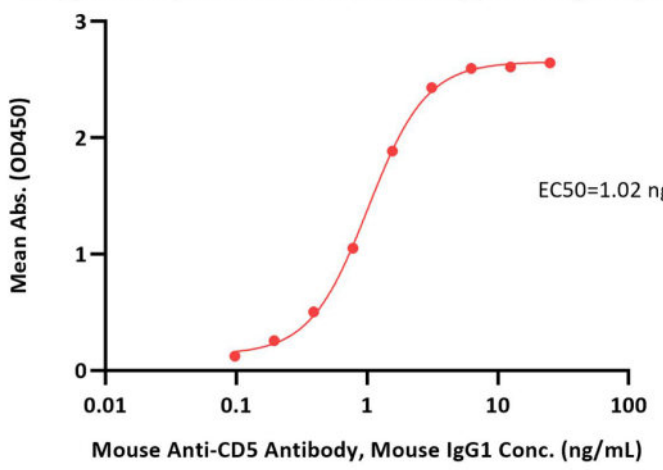
- -20°C to -70°C for 24 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE

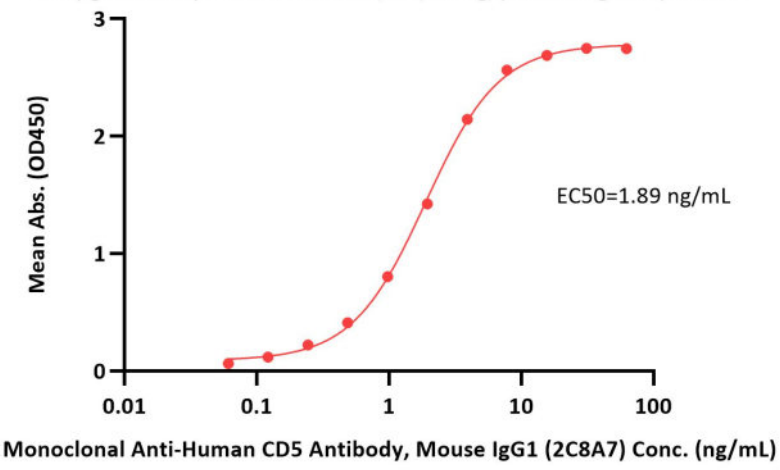


Biotinylated Human CD5, His,Avitag, premium grade on SDS-PAGE under reducing (R) and non-reducing (NR) conditions. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%.

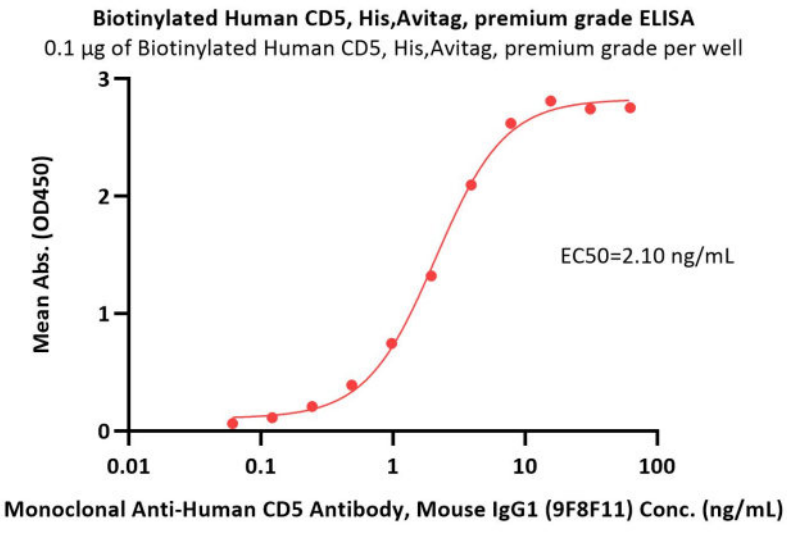
Bioactivity-ELISA



Immobilized Biotinylated Human CD5, His,Avitag, premium grade (Cat. No. CD5-H82E5) at 1 μg/mL (100 μL/well) on streptavidin (Cat. No. STN-N5116) precoated (0.5 μg/well) plate can bind Mouse Anti-CD5 Antibody, Mouse IgG1 with a linear range of 0.1-1.6 ng/mL (QC tested).



Immobilized Biotinylated Human CD5, His,Avitag, premium grade (Cat. No. CD5-H82E5) at 1 μg/mL (100 μL/well) on streptavidin (Cat. No. STN-N5116) precoated (0.5 μg/well) plate can bind Monoclonal Anti-Human CD5 Antibody, Mouse IgG1 (2C8A7) with a linear range of 0.06-4 ng/mL (Routinely tested).



Immobilized Biotinylated Human CD5, His,Avitag, premium grade (Cat. No. CD5-H82E5) at 1 μg/mL (100 μL/well) on streptavidin (Cat. No. STN-N5116) precoated (0.5 μg/well) plate can bind Monoclonal Anti-Human CD5 Antibody, Mouse IgG1 (9F8F11) with a linear range of 0.06-4 ng/mL (Routinely tested).

Background

T-cell surface glycoprotein CD5 is also known as Lymphocyte antigen T1/Leu-1 and LEU1,which is phosphorylated on tyrosine residues by LYN,so CD5 can create binding sites for PTPN6/SHP-1.CD5 may act as a receptor in regulating T-cell proliferation. CD5 is expressed at various developmental and activation stages on human B cells.CD5 is a well established negative regulator of TCR and BCR signalling.CD5-positive cells may also prevent the emergence of autoimmunity by provision of cytokines such as IL-10. Development,selection and function of different B- and T-cell subsets or their preferential survival may be directly or indirectly dependent on different glycan structures associated with CD5 or CD5-like molecules.