

## CD45 Protein, Human, Recombinant (aa 26-577, hFc)

### General Information

|                       |   |
|-----------------------|---|
| Synonyms:             | CD45;CD45R;LCA;PTPRC;L-CA;T200;B220;GP180;LY5;EC 3.1.3.48   |
| Protein Construction: | Gln26-Lys577  |
| Species:              | Human   |
| Expression Host:      | HEK293 Cells  |
| Accession:            | P08575-3  |
| Molecular Weight:     | 87.53 kDa (predicted). Due to glycosylation, the protein migrates to 120-160 kDa based on Tris-Bis PAGE result. |

### QC Testing

|                      |   |
|----------------------|---|
| Biological Activity: | Immobilized AHuman CD45, hFc Tag at 0.5 µg/mL (100 µL/well) on the plate. Dose response curve for Biotinylated Anti-CD45 Antibody, hFc Tag with the EC50 of 0.16 µg/mL determined by ELISA. |
| Purity:              | > 95% as determined by Tris-Bis PAGE; > 95% as determined by HPLC   |
| Endotoxin:           | < 1.0 EU/µg of the protein as determined by the LAL method.   |
| Formulation:         | Lyophilized from a solution filtered through a 0.22 µm filter, containing PBS (pH 7.4). Typically, 8% trehalose is incorporated as a protective agent before lyophilization.                |

### Preparation and Storage

#### Reconstitution:

Reconstitute the lyophilized protein in distilled 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:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. 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

PTPRC (also known as CD45), T cells require the protein tyrosine phosphatase CD45 to detect and respond to antigen because it activates the Src family kinase Lck, which phosphorylates the T cell antigen receptor (TCR) complex. CD45 activates Lck by opposing the negative regulatory kinase Csk. Paradoxically, CD45 has also been implicated in suppressing TCR signaling by dephosphorylating the same signaling motifs within the TCR complex

upon which Lck acts.

Reference

Courtney AH, et al. CD45 functions as a signaling gatekeeper in T cells. Sci Signal. 2019 Oct 22;12(604): eaaw815doi: 10.1126/scisignal.aaw815PMID: 31641081; PMCID: PMC6948007.

**Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins**

This product is for Research Use Only· Not for Human or Veterinary or Therapeutic Use

Tel:781-999-4286 E\_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481