

## Recombinant Human PTPRC protein, His-tagged

**Cat. No.** PTPRC-576H    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
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| <b>Product Overview</b> | Recombinant Human CD45R0 is produced by our Mammalian expression system and the target gene encoding Gln26Lys416 is expressed with a 6His tag at the C-terminus.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Source</b>           | HEK293                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>ProteinLength</b>    | Gln26Lys416                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Description</b>      | <p>Protein tyrosine phosphatase, receptor type C (CD45), also known as PTPRC is a member of the protein tyrosine phosphatase (PTP) family which is known for its function to serve as signaling molecules and to regulate a variety of cellular processes such as cell proliferation, differentiation, mitotic cycle and oncogenic transformation. It is a variably glycosylated 180-220 kDa transmembrane protein that is abundantly expressed on all nucleated cells of hematopoietic origin. CD45 has several isoforms, expressed according to cell type, developmental stage and antigenic exposure. CD45 has been best studied in T cells, where it determines T cell receptor signaling thresholds. CD45 is moved into or out of the immunological synapse (IS) membrane microdomain depending on the relative influence of interaction with the extracellular galectin lattice or the intracellular actin cytoskeleton. Galectin interaction can be fine-tuned by varying usage of the heavily O-glycosylated spliced regions and sialylation of N-linked carbohydrates. Within the IS, CD45 dephosphorylates and negatively regulates the src family kinase, LCK. In other</p> |

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leukocytes, CD45 influences differentiation and links immunoreceptor signaling with cytokine secretion and cell survival, partially overlapping in function with DEP-1/CD148. CD45 deletion causes in severe immunodeficiency, while point mutations may be associated with autoimmune disorders.

**Form** Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4.

**Endotoxin** Less than 0.1 ng/g (1 EU/g) as determined by LAL test.

**Purity** Greater than 95% as determined by reducing SDS-PAGE.

**Storage** Lyophilized protein should be stored at < -20°C, though stable at room temperature for 3 weeks.  
Reconstituted protein solution can be stored at 4-7°C for 2-7 days.  
Aliquots of reconstituted samples are stable at < -20°C for 3 months.

**Reconstitution** Always centrifuge tubes before opening. Do not mix by vortex or pipetting.  
It is not recommended to reconstitute to a concentration less than 100µg/ml.  
Dissolve the lyophilized protein in distilled water.  
Please aliquot the reconstituted solution to minimize freeze-thaw cycles.

## GENE INFORMATION

**Gene Name** PTPRC protein tyrosine phosphatase receptor type C [ Homo sapiens (human) ]

**Official Symbol** PTPRC

**Synonyms** B220; CD45 antigen; CD45; CD45R; LCA; L-CA; LY5; protein tyrosine phosphatase, receptor type, C; PTPRC; receptor-type tyrosine-protein phosphatase C; CD45R0

**Gene ID** 5788

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|----------------|-----------------------------|
| mRNA Refseq    | <a href="#">NM_002838.5</a> |
| Protein Refseq | <a href="#">NP_002829.3</a> |
| MIM            | <a href="#">151460</a>      |
| UniProt ID     | <a href="#">P08575</a>      |

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