

Product datasheet for **TP726765**

CD45 (PTPRC) Human Recombinant Protein

Product data:

Product Type:	Recombinant Proteins
Description:	Recombinant Human CD45/PTPRC (C-6His)
Species:	Human
Expression cDNA Clone or AA Sequence:	Gln26 \rightarrow Lys577
Tag:	C-6His
Buffer:	Lyophilized from a 0.2 um filtered solution of PBS, pH7.4.
Note:	Recombinant Human Receptor-type Tyrosine-protein Phosphatase C is produced by our Mammalian expression system and the target gene encoding Gln26 \rightarrow Lys577 is expressed with a 6His tag at the C-terminus.
Storage:	Lyophilized protein should be stored at $\leq -20^{\circ}\text{C}$, stable for one year after receipt. Reconstituted protein solution can be stored at $2-8^{\circ}\text{C}$ for 2-7 days. Aliquots of reconstituted samples are stable at $\leq -20^{\circ}\text{C}$ for 3 months.
Stability:	12 months from date of despatch
Locus ID:	5788
UniProt ID:	P08575
Synonyms:	B220; CD45 antigen; CD45; CD45R; LCA; L-CA; LY5; protein tyrosine phosphatase, receptor type, C; PTPRC; receptor-type tyrosine-protein phosphatase C

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Summary:

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 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.

Protein Families:

Druggable Genome, ES Cell Differentiation/IPS, Phosphatase, Transmembrane

Protein Pathways:

Cell adhesion molecules (CAMs), Fc gamma R-mediated phagocytosis, Primary immunodeficiency, T cell receptor signaling pathway