

CD45 Protein, Human (552a.a, HEK293, C-His)

Cat. No.:	HY-P7887A
Synonyms:	rHuReceptor-type tyrosine-protein phosphatase C/CD45, His; B220; CD45 antigen; CD45; CD45R; LCA; L-CA; LY5; protein tyrosine phosphatase, receptor type, C; PTPRC; receptor-type tyrosine-protein phosphatase C
Species:	Human
Source:	HEK293
Accession:	P08575 (Q26-K577)
Gene ID:	5788
Molecular Weight:	130-180 kDa due to glycosylation

PROPERTIES

AA Sequence

Q S P T P S P T G L	T T A K M P S V P L	S S D P L P T H T T	A F S P A S T F E R
E N D F S E T T T S	L S P D N T S T Q V	S P D S L D N A S A	F N T T G V S S V Q
T P H L P T H A D S	Q T P S A G T D T Q	T F S G S A A N A K	L N P T P G S N A I
S D V P G E R S T A	S T F P T D P V S P	L T T T L S L A H H	S S A A L P A R T S
N T T I T A N T S D	A Y L N A S E T T T	L S P S G S A V I S	T T T I A T T P S K
P T C D E K Y A N I	T V D Y L Y N K E T	K L F T A K L N V N	E N V E C G N N T C
T N N E V H N L T E	C K N A S V S I S H	N S C T A P D K T L	I L D V P P G V E K
F Q L H D C T Q V E	K A D T T I C L K W	K N I E T F T C D T	Q N I T Y R F Q C G
N M I F D N K E I K	L E N L E P E H E Y	K C D S E I L Y N N	H K F T N A S K I I
K T D F G S P G E P	Q I I F C R S E A A	H Q G V I T W N P P	Q R S F H N F T L C
Y I K E T E K D C L	N L D K N L I K Y D	L Q N L K P Y T K Y	V L S L H A Y I I A
K V Q R N G S A A M	C H F T T K S A P P	S Q V W N M T V S M	T S D N S M H V K C
R P P R D R N G P H	E R Y H L E V E A G	N T L V R N E S H K	N C D F R V K D L Q
Y S T D Y T F K A Y	F H N G D Y P G E P	F I L H H S T S Y N	S K

Biological Activity Measured by its ability to inhibit the proliferation of M-NFS-60 Mice myeloid leukemia lymphocytes. The ED₅₀ for this effect is 2.406 µg/mL, corresponding to a specific activity is 415.62 units/mg.

Appearance Lyophilized powder.

Formulation Lyophilized from a 0.2 µm filtered solution of 50 mM Tris-HCL, 300 mM NaCl, pH 7.4.

Endotoxin Level <1 EU/µg, determined by LAL method.

Reconstitution It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH₂O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).

Storage & Stability Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.

Shipping

Room temperature in continental US; may vary elsewhere.

DESCRIPTION**Background**

Receptor-type tyrosine-protein phosphatase C (PTPRC) is a member of the protein tyrosine phosphatase (PTP) family, also known as CD45, is a transmembrane glycoprotein. PTPs are known to be signaling molecules that regulate a variety of cellular processes including cell growth, differentiation, mitosis, and oncogenic transformation.

PTPRC contains an extracellular domain, a single transmembrane segment and two tandem intracytoplasmic catalytic domains, and thus is classified as a receptor type PTP.

PTPRC has been shown to be an essential regulator of T- and B-cell antigen receptor signaling as PTPRC positive regulate T-cell coactivation upon binding to DPP4, recruiting and dephosphorylating SKAP1 and FYN. PTPRC also dephosphorylates LYN, and thereby modulates LYN activity.

PTPRC functions through either direct interaction with components of the antigen receptor complexes, or by activating various Src family kinases required for the antigen receptor signaling. PTPRC also suppresses JAK kinases, and thus functions as a regulator of cytokine receptor signaling.

PTPRC gene has many alternatively spliced transcripts variants, which encode distinct isoforms^{[1][2][3]}.

Caution: Product has not been fully validated for medical applications. For research use only.

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