**Proteins** 



## **Product** Data Sheet

## PTPRC/CD45RABC Protein, Human (HEK293, hFc)

Cat. No.: HY-P701052

Synonyms: L-CA; CD45; T200; PTPRC; B220; CD45R; GP180; LCA; LY5; EC 3.1.3.48

Species: HEK293 Source:

Accession: P08575-3 (Q26-K577)

Gene ID:

Molecular Weight: 120-160 kDa

			IES

Appearance	Lyophilized powder
Formulation	Lyophilized from 0.22 $\mu$ m filtered solution in PBS (pH 7.4). Normally 8% trehalose is added as protectant before lyophilization.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 $\mu g/mL$ in ddH <sub>2</sub> O.
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 Tcell 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<sup>[1][2][3]</sup>.

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 $\label{lem:caution:Product} \textbf{Caution: Product has not been fully validated for medical applications. For research use only.}$ 

Tel: 609-228-6898 Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA

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