# abcam

## Product datasheet

## Recombinant human CD45 protein ab94517

## 2 Images

**Description** 

Product name Recombinant human CD45 protein

Biological activity The specific activity of ab94517 is 11,500 nmol phosphate released /min/mg

Purity > 90 % SDS-PAGE.

>90% as determined by densitometry. Affinity purified.

Expression system Baculovirus infected Sf9 cells

Protein length Protein fragment

Animal free No

Nature Recombinant

**Species** Human

Amino acids 604 to 1304

## **Specifications**

Our Abpromise guarantee covers the use of ab94517 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

**Applications** Functional Studies

Western blot SDS-PAGE

Form Liquid

## **Preparation and Storage**

**Stability and Storage** Shipped on dry ice. Upon delivery aliquot and store at -80°C. Avoid freeze / thaw cycles.

pH: 7.00

Preservative: 1.02% Imidazole

Constituents: 1.045% MOPS, 0.00174% PMSF, 0.00385% DTT, 25% Glycerol (glycerin,

glycerine), 1.74% Sodium chloride

This product is an active protein and may elicit a biological response in vivo, handle with caution.

#### **Function**

Protein tyrosine-protein phosphatase required for T-cell activation through the antigen receptor. Acts as a positive regulator of T-cell coactivation upon binding to DPP4. The first PTPase domain has enzymatic activity, while the second one seems to affect the substrate specificity of the first one. Upon T-cell activation, recruits and dephosphorylates SKAP1 and FYN.

#### Involvement in disease

Defects in PTPRC are a cause of severe combined immunodeficiency autosomal recessive T-cell-negative/B-cell-positive/NK-cell-positive (T(-)B(+)NK(+) SCID) [MIM:608971]. A form of severe combined immunodeficiency (SCID), a genetically and clinically heterogeneous group of rare congenital disorders characterized by impairment of both humoral and cell-mediated immunity, leukopenia, and low or absent antibody levels. Patients present in infancy recurrent, persistent infections by opportunistic organisms. The common characteristic of all types of SCID is absence of T-cell-mediated cellular immunity due to a defect in T-cell development. Genetic variations in PTPRC are involved in multiple sclerosis susceptibility (MS) [MIM:126200]. MS is a neurodegenerative disorder characterized by the gradual accumulation of focal plaques of demyelination particularly in the periventricular areas of the brain. Peripheral nerves are not affected. Onset usually in third or fourth decade with intermittent progression over an extended period. The cause is still uncertain.

#### Sequence similarities

Belongs to the protein-tyrosine phosphatase family. Receptor class 1/6 subfamily.

Contains 2 fibronectin type-III domains.

Contains 2 tyrosine-protein phosphatase domains.

The first PTPase domain interacts with SKAP1.

## Post-translational

modifications

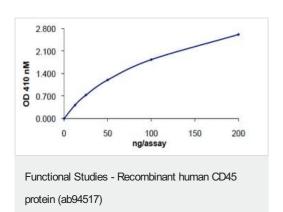
Heavily N- and O-glycosylated.

Cellular localization

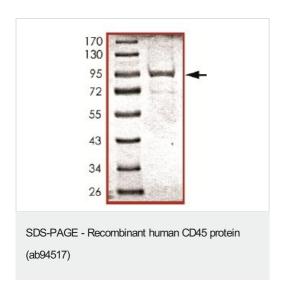
Membrane. Membrane raft. Colocalized with DPP4 in membrane rafts.

## **Images**

**Domain** 



ab94517 in a Sample Kinase Activity Plot.



ab94517 analysed by SDS PAGE at approximately 95kDa

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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