abcam

Product datasheet

Recombinant human CD45 protein ab42584

Description

Product name	Recombinant human CD45 protein
Biological activity	Specific Activity: 26 U/µg. One unit will hydrolyze 1 nmol p-nitrophenyl phosphate per minute at pH 7.4 and 30°C. Assay buffer: 50 mM HEPES, pH 7.4, 2 mM EDTA, 3mM DTT, 100 mM NaCl, 50 mM pNPP. The specific activity of CD45 was determined using pNPP. Enzyme reaction condition: 20 mM pNPP, 2 min incubation at 30°C, 2µg/ml enzyme.
Purity	> 90 % SDS-PAGE. Affinity purified.
Expression system	Baculovirus infected Sf9 cells
Protein length	Protein fragment
Animal free	No
Nature	Recombinant
Species	Human
Amino acids	584 to 1256

Specifications

Our **Abpromise guarantee** covers the use of **ab42584** 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
Form	Liquid
Additional notes	Protein was expressed in a Baculovirus Sf9 expression system. Expected molecular weight 75kDa.

Preparation and Storage

Stability and Storage	Shipped on Dry Ice. Upon delivery aliquot. Store at -80°C. Avoid freeze / thaw cycle. pH: 8.00 Constituents: 0.077% (R*,R*)-1,4-Dimercaptobutan-2,3-diol, 0.395% Tris HCl, 0.05% Tween, 50% Glycerol (glycerin, glycerine), 0.435% Sodium chloride This product is an active protein and may elicit a biological response in vivo, handle with caution.

General Info

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.
Domain	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.

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit **https://www.abcam.com/abpromise** or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors