

# CD45 (12A9) Mouse mAb

CatalogNo: YM3046

## Key Features

### Host Species

- Mouse

### Reactivity

- Human

### Applications

- WB,IHC,IF

### MW

- 147kD (Observed)

## Storage

**Storage\*** -15°C to -25°C/1 year(Do not lower than -25°C)

**Formulation** PBS, pH 7.4, containing 0.5%BSA, 0.02% sodium azide as Preservative and 50% Glycerol.

## Recommended Dilution Ratios

IF 1:50-200

WB 1:2000

IHC 1:50-300

## Basic Information

**Clonality** Monoclonal

**Clone Number** 12A9

## Immunogen Information

**Immunogen** Synthetic Peptide of CD45

**Specificity** The antibody detects endogenous CD45 proteins.

## Target Information

**Gene name** PTPRC

**Protein Name** Receptor-type tyrosine-protein phosphatase C

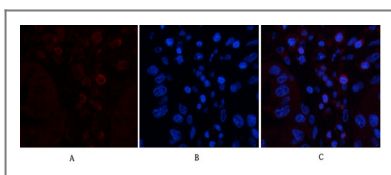
Organism	Gene ID	UniProt ID
Human	<a href="#">5788</a> ;	<a href="#">P08575</a> ;
Mouse		<a href="#">P06800</a> ;
Rat	<a href="#">24699</a> ;	<a href="#">P04157</a> ;

**Cellular Localization** Cell membrane ; Single-pass type I membrane protein . Membrane raft . Colocalized with DPP4 in membrane rafts. .

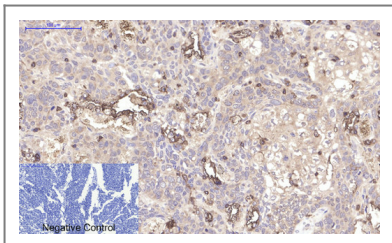
**Tissue specificity** Isoform 1: Detected in thymocytes. Isoform 2: Detected in thymocytes. Isoform 3: Detected in thymocytes. Isoform 4: Not detected in thymocytes. Isoform 5: Detected in thymocytes. Isoform 6: Not detected in thymocytes. Isoform 7: Detected in thymocytes. Isoform 8: Not detected in thymocytes.

**Function** Alternative products:At least 8 isoforms are produced,Catalytic activity:Protein tyrosine phosphate + H(2)O = protein tyrosine + phosphate.,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]. SCID refers to 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 with SCID present in infancy with 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.,Disease: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.,Domain:The first PTPase domain interacts with SKAP1.,Function:Required for T-cell activation through the antigen receptor. 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 an dephosphorylates SKAP1 and FYN.,online information:CD45 entry,online information:PTPRC mutation db,PTM:Heavily N- and O-glycosylated.,similarity:Belongs to the protein-tyrosine phosphatase family. Receptor class 1/6 subfamily.,similarity:Contains 2 fibronectin type-III domains.,similarity:Contains 2 tyrosine-protein phosphatase domains.,subunit:Binds GANAB and PRKCSH (By similarity). Interacts with SKAP1.,

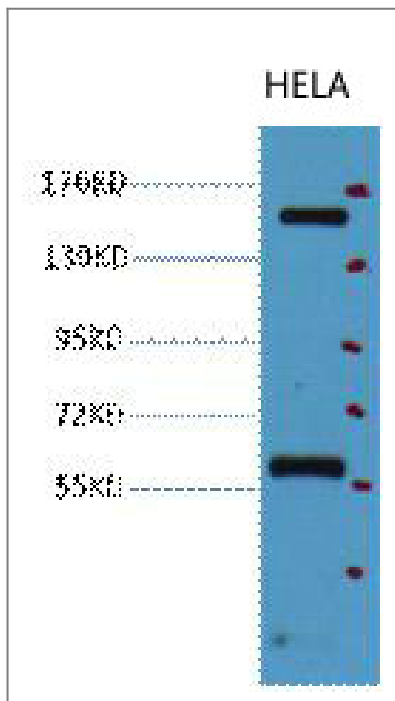
## Validation Data



Immunofluorescence analysis of human-liver-cancer tissue. 1,CD45 Monoclonal Antibody (12A9) (red) was diluted at 1:200 (4°C overnight). 2, Cy3 labeled Secondary antibody was diluted at 1:300 (room temperature, 50min).3, Picture B: DAPI (blue) 10min. Picture A:Target. Picture B: DAPI. Picture C: merge of A+B



Immunohistochemical analysis of paraffin-embedded Human-lung-cancer tissue. 1,CD45 Monoclonal Antibody (12A9) was diluted at 1:200 (4°C overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval (>98°C,20min). 3,Secondary antibody was diluted at 1:200 (room temperature, 30min). Negative control was used by secondary antibody only.



Western blot analysis of HeLa, diluted at 1:2000.

## Contact information

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Please scan the QR code to access additional product information:  
**CD45 (12A9) Mouse mAb**

For Research Use Only. Not for Use in Diagnostic Procedures.

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