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# CD45 Monoclonal Antibody(12A9)

Catalog # AP63300

## Product Information

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|---|---|
| **Application** | IF, ICC, WB, IHC-P |
| **Primary Accession** | P08575 |
| **Reactivity** | Human |
| **Host** | Mouse |
| **Clonality** | Monoclonal |
| **Calculated MW** | 147486 |

## Additional Information

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|---|---|
| **Gene ID** | 5788 |
| **Other Names** | PTPRC; CD45; Receptor-type tyrosine-protein phosphatase C; Leukocyte common antigen; L-CA; T200; CD45 |
| **Dilution** | IF~~IF: 1:50-200 WB: 1:2000 IHC 1:50-300 ICC~~N/A WB~~IF: 1:50-200 WB: 1:2000 IHC 1:50-300 IHC-P~~IF: 1:50-200 WB: 1:2000 IHC 1:50-300 |
| **Format** | PBS, pH 7.4, containing 0.09% (W/V) sodium azide as Preservative and 50% Glycerol. |
| **Storage Conditions** | -20℃ |

## Protein Information

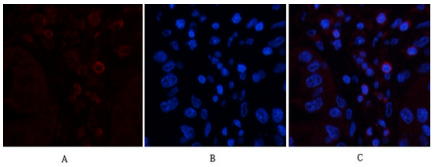
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|---|---|
| **Name** | PTPRC ( HGNC:9666) |
| **Synonyms** | CD45 |
| **Function** | Protein tyrosine-protein phosphatase required for T-cell activation through the antigen receptor (PubMed:35767951). Acts as a positive regulator of T-cell coactivation 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. Dephosphorylates LYN, and thereby modulates LYN activity (By similarity). Interacts with CLEC10A at antigen presenting cell-T cell contact; CLEC10A on immature dendritic cells recognizes Tn antigen- carrying PTPRC/CD45 receptor on effector T cells and modulates T cell activation threshold to limit autoreactivity. |
| **Cellular Location** | Cell membrane; Single-pass type I membrane protein. Membrane raft. Synapse. Note=Colocalized with DPP4 in membrane rafts. |
| **Tissue Location** | 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.

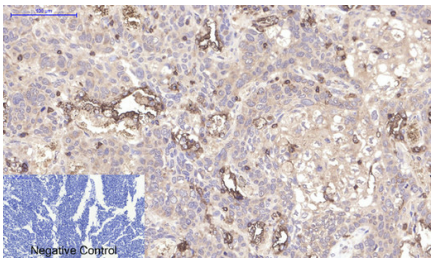
## Background

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. Dephosphorylates LYN, and thereby modulates LYN activity (By similarity).

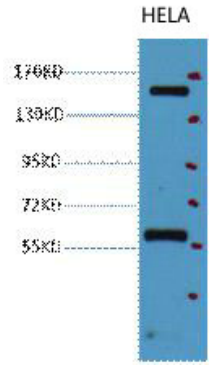
## Images




Immunofluorescence analysis of human-liver-cancer tissue. 1,CD45 Monoclonal Antibody(12A9)(red) was diluted at 1:200(4°C,overnight). 2, Cy3 labled 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.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.