

**CD45 Monoclonal Antibody(12A9)**  
Catalog # AP63300**Specification****CD45 Monoclonal Antibody(12A9) - Product Information**

Application	WB, IHC-P, IF
Primary Accession	<a href="#">P08575</a>
Reactivity	Human
Host	Mouse
Clonality	Monoclonal

**CD45 Monoclonal Antibody(12A9) - Additional Information****Gene ID** 5788**Other Names**

PTPRC; CD45; Receptor-type tyrosine-protein phosphatase C; Leukocyte common antigen; L-CA; T200; CD45

**Dilution**WB~~IF: 1:50-200 WB: 1:2000 IHC 1:50-300  
IHC-P~~N/A  
IF~~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°C

**CD45 Monoclonal Antibody(12A9) - Protein Information****Name** PTPRC ([HGNC:9666](#))**Synonyms** CD45**Function**

Protein tyrosine-protein phosphatase required for T-cell activation through the antigen receptor (PubMed:<a href="http://www.uniprot.org/citations/35767951" target="\_blank">35767951</a>). 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

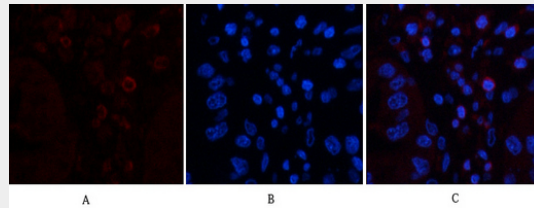
Isoform 1: Detected in thymocytes. Isoform 2: Detected in thymocytes. Isoform 3: Detected in thymocytes. Isoform 4: Not detected in thymocytes. Isoform 5: Detected in thymocytes. Isoform 6: Not detected in thymocytes. Isoform 7: Detected in thymocytes Isoform 8: Not detected in thymocytes.

### CD45 Monoclonal Antibody(12A9) - Protocols

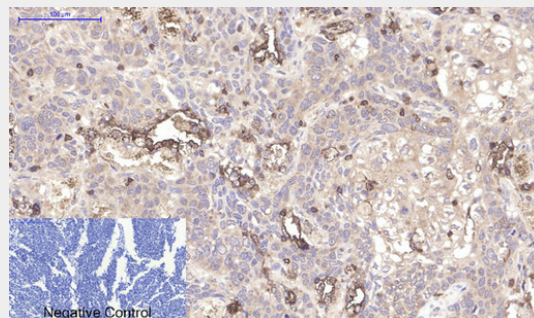
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

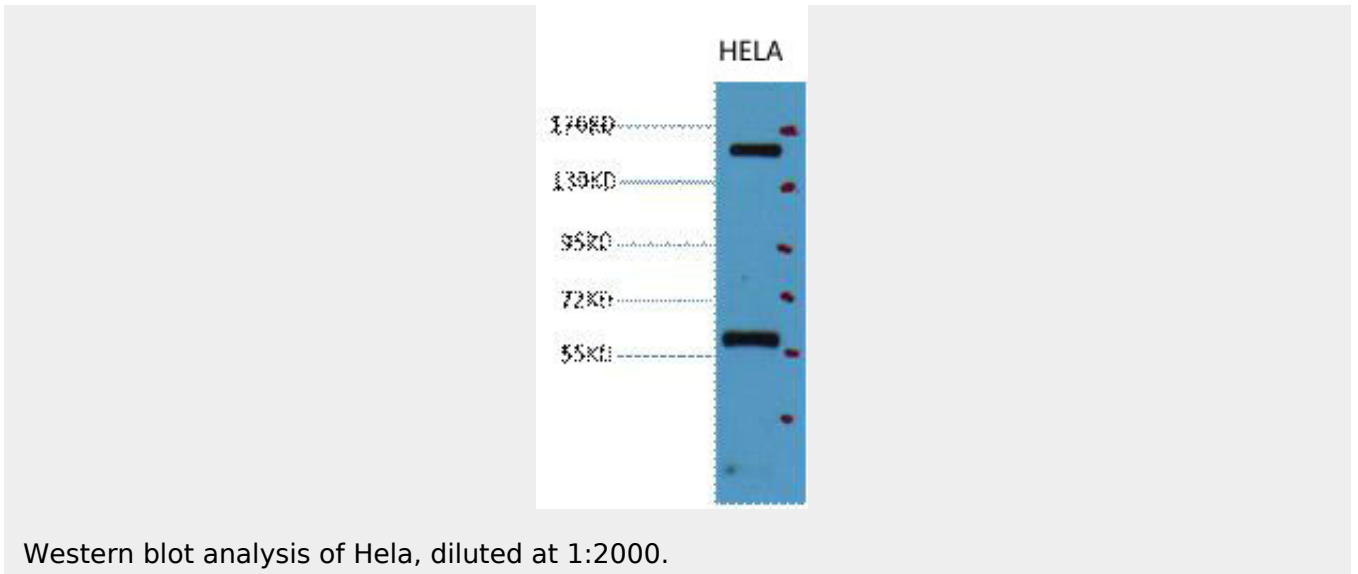
### CD45 Monoclonal Antibody(12A9) - Images



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.



### **CD45 Monoclonal Antibody(12A9) - 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).