SunLong Biotech Co.,LTD
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Mouse Anti-CD45 antibody

SLM-33052M

Product Name	CD45
Chinese Name	白细胞共同抗原 CD45 单克隆抗体
Alias	B220; CD 45; CD-45; CD45; cd45 antigen; ec3.1.3.48; CD45R; GP180; GP180; GP 180; L CA; LCA; L-CA; Leukocyte common antigen; LY5; Ly-5 glycoprotein; Protein tyrosine phosphatase receptor type C; Protein tyrosine phosphatase receptor type c polypeptide; protein tyrosine phosphatase, receptor type, C; Receptor-type tyrosine-protein phosphatase C; PTPRC; PTPRC_HUMAN; SCID due to PTPRC deficiency; T200; T200 glycoprotein; T200 leukocyte common antigen; Human homolog of severe combined immunodeficiency due to PTPRC deficiency.
Research Area	Cell biology immunology Neurobiology Signal transduction Stem cells Cell Surface Molecule glycoprotein Cell type markers Natural killer cells lymphocyte t-lymphocyte b-lymphocyte Transmembrane protein The cell membrane 蛋白
Immunogen Species	Mouse
Clonality	Monoclonal
Clone NO.	14A9
React Species	Human
Applications	WB=1:500-1000,Flow-Cyt=0.5ug/Test （Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Theoretical molecular weight	143kDa
Cellular localization	The cell membrane
Form	Liquid
Concentration	1mg/ml
immunogen	Recombinant human CD45
Lsotype	IgG1
Purification	affinity purified by Protein G
Buffer Solution	1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.

Storage Shipped at 4℃. Store at -20 ℃ for one year. Avoid repeated freeze/thaw cycles.

Attention This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

PubMed PubMed

Product Detail

The protein encoded by this gene is a member of the protein tyrosine phosphatase (PTP) family. PTPs are known to be signaling molecules that regulate a variety of cellular processes including cell growth, differentiation, mitotic cycle, and oncogenic transformation. This PTP contains an extracellular domain, a single transmembrane segment and two tandem intracytoplasmic catalytic domains, and thus belongs to receptor type PTP. This gene is specifically expressed in hematopoietic cells. This PTP has been shown to be an essential regulator of T- and B-cell antigen receptor signaling. It functions through either direct interaction with components of the antigen receptor complexes, or by activating various Src family kinases required for the antigen receptor signaling. This PTP also suppresses JAK kinases, and thus functions as a regulator of cytokine receptor signaling. Four alternatively spliced transcripts variants of this gene, which encode distinct isoforms, have been reported. [provided by RefSeq, Jul 2008].

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. Dephosphorylates LYN, and thereby modulates LYN activity.

Subunit:
Binds GANAB and PRKCSH. Interacts with SKAP1. Interacts with DPP4; the interaction is enhanced in a interleukin-12-dependent manner in activated lymphocytes.

Subcellular Location:
Membrane; Single-pass type I membrane protein. Membrane raft. Note=Colocalized with DPP4 in membrane rafts.

Post-translational modifications:
Heavily N- and O-glycosylated.

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.

Similarity:
Belongs to the protein-tyrosine phosphatase family. Receptor class 1/6 subfamily.
Contains 2 fibronectin type-III domains.
Contains 2 tyrosine-protein phosphatase domains.

SWISS:
P08575

Gene ID:
5788

Database links:

Entrez Gene: 5788 Human

Entrez Gene: 19264 Mouse

Entrez Gene: 24699 Rat

Omim: 151460 Human

SwissProt: P08575 Human

SwissProt: P06800 Mouse

SwissProt: P04157 Rat

Unigene: 654514 Human

Unigene: 391573 Mouse

Unigene: 90166 Rat

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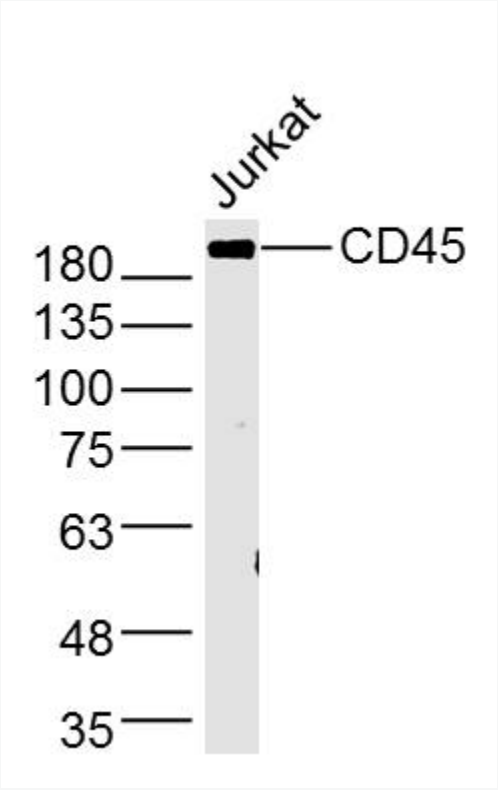
Product Picture



Sample: Jurkat Cell (Human) Lysate at 40 ug

Primary: Anti- CD45 (SLM-33052M) at 1/2 000 dilution

Secondary: IRDye800CW Goat Anti-Mouse IgG at 1/20000 dilution

Predicted band size: 143 kD

Observed band size: 240 kD

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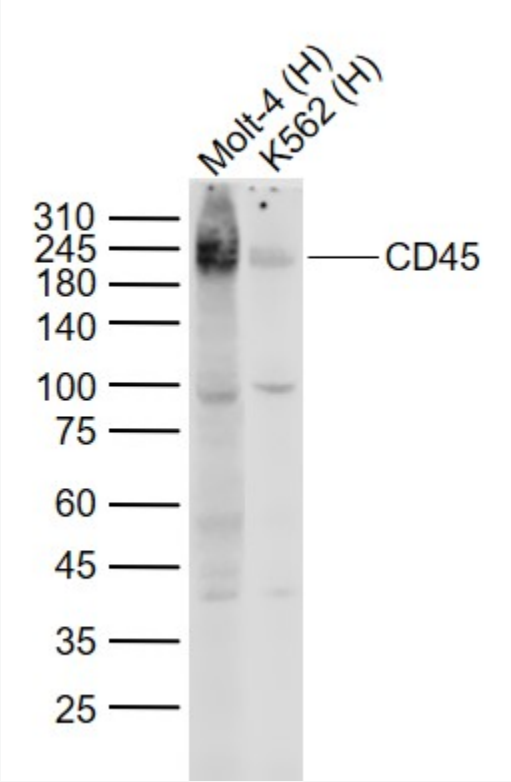

Sample:

Lane 1: Molt-4 (Human) Cell Lysate at 30 ug

Lane 2: K562 (Human) Cell Lysate at 30 ug

Primary: Anti-CD45 (SLM-33052M) at 1/1000 dilution

Secondary: IRDye800CW Goat Anti-Mouse IgG at 1/20000 dilution

Predicted band size: 220 kD

Observed band size: 220 kD

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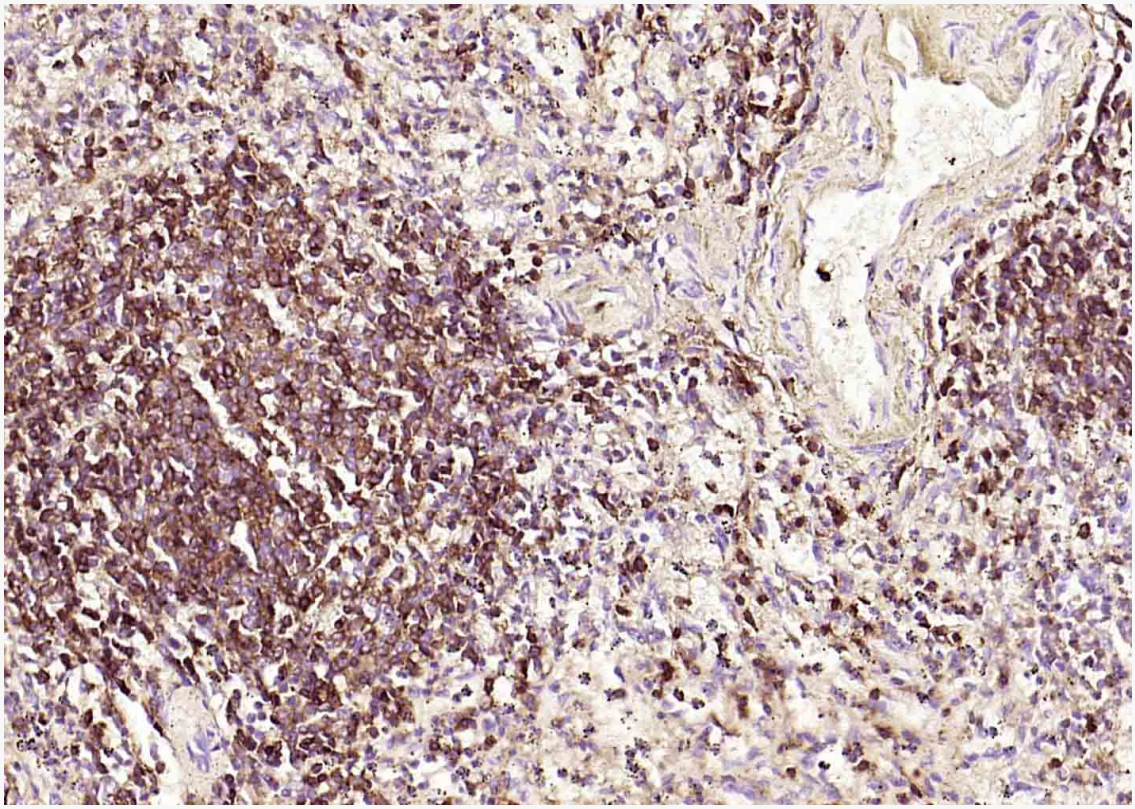

Paraformaldehyde-fixed, paraffin embedded (human spleen); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (CD45) Monoclonal Antibody, Unconjugated (SLM-33052M) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Mouse)(sp-0024) instructionsand DAB staining.

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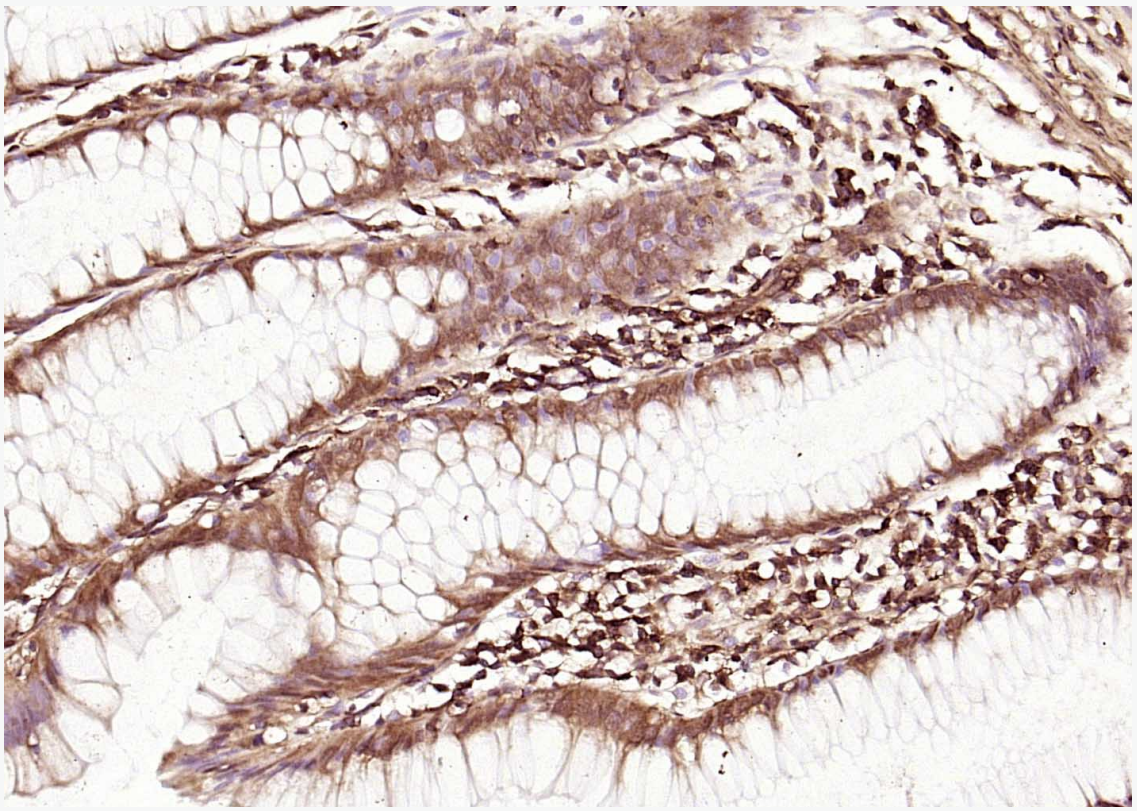

Paraformaldehyde-fixed, paraffin embedded (human colon); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (CD45) Monoclonal Antibody, Unconjugated (SLM-33052M) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Mouse)(sp-0024) instructionsand DAB staining.

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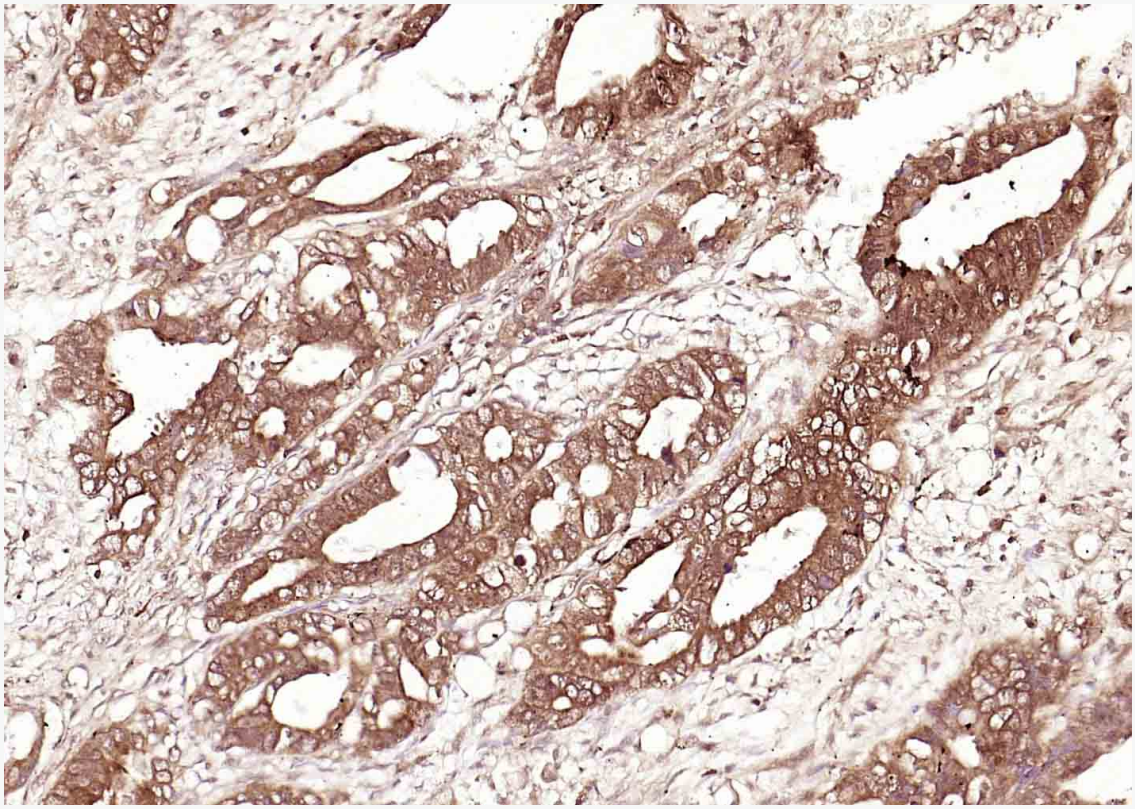

Paraformaldehyde-fixed, paraffin embedded (human colon carcinoma); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (CD45) Monoclonal Antibody, Unconjugated (SLM-33052M) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Mouse)(sp-0024) instructionsand DAB staining.

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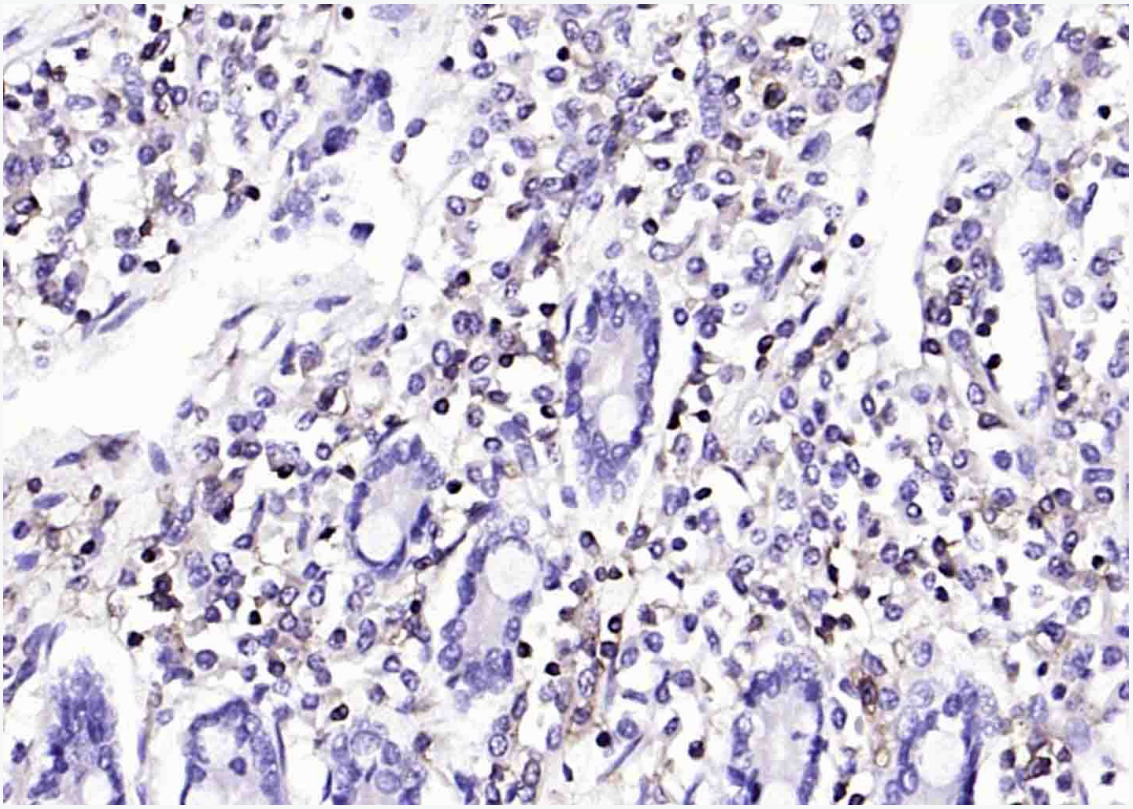

Paraformaldehyde-fixed, paraffin embedded (Human duodenum); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (CD45) Monoclonal Antibody, Unconjugated (SLM-33052M) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Mouse)(sp-0024) instructionsand DAB staining.

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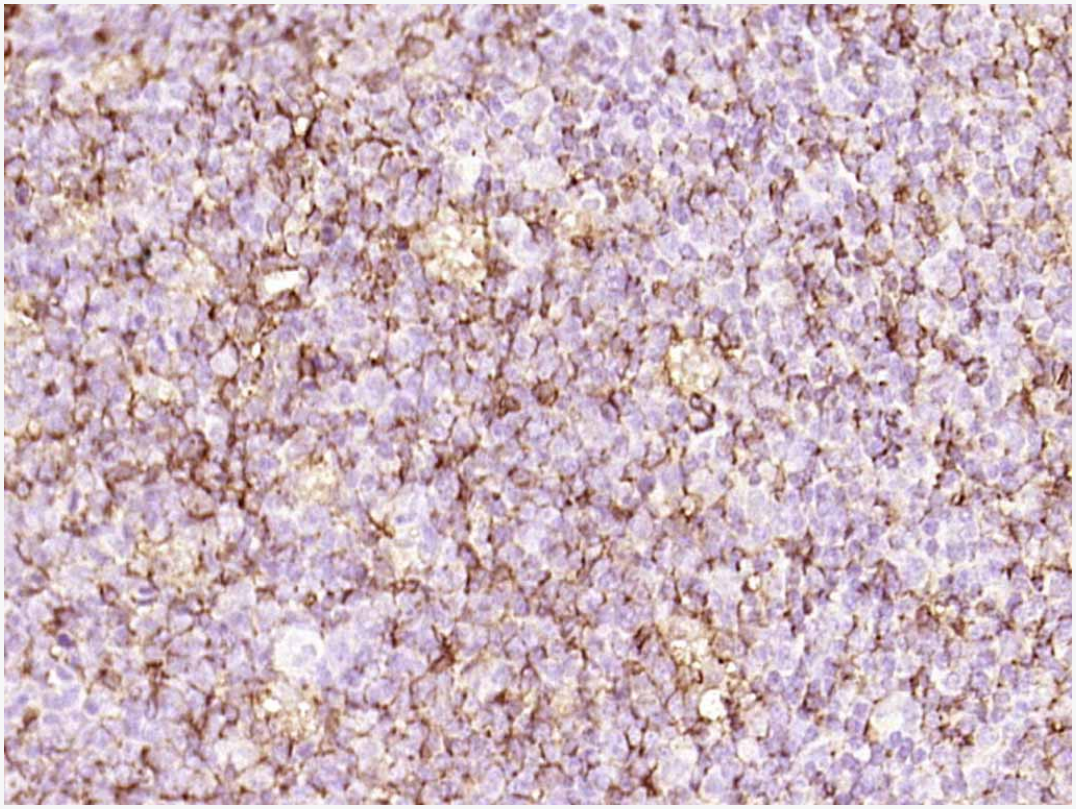
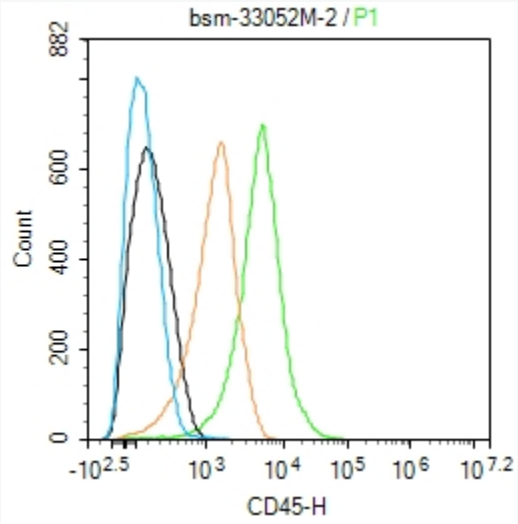


Paraformaldehyde-fixed, paraffin embedded (human tonsil); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (CD45) Monoclonal Antibody, Unconjugated (SLM-33052M) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Mouse)(sp-0024) instructionsand DAB staining.



Blank control:U937.

Primary Antibody (green line): Mouse Anti-CD45 antibody (SLM-33052M)

Dilution: 1:50;

Secondary Antibody : Goat anti-mouse IgG-FITC

Dilution: 0.5ug/Test.

Protocol

The cells were incubated in 5%BSA to block non-specific protein-protein interactions for 30 min at room temperature .Cells stained with Primary Antibody for 30 min at room temperature. The secondary antibody used for 40 min at room temperature. Acquisition of 20,000 events was performed.