Best Tools for immunology Research

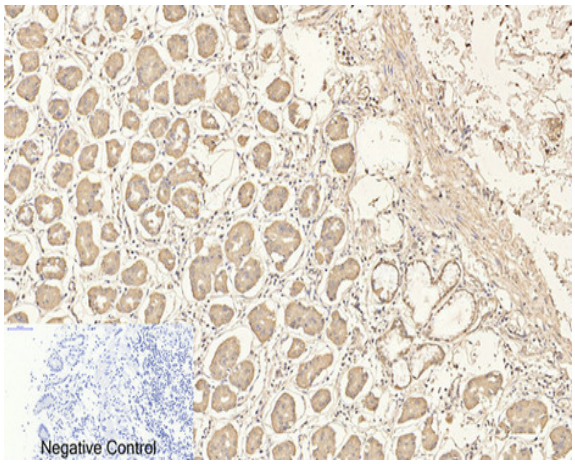
CD4 Monoclonal Antibody(11A1)

Catalog No :	YM3070
Reactivity :	Human;Mouse;Rat
Applications :	IHC
Target :	CD4
Fields :	>>Viral life cycle - HIV-1;>>Cytokine-cytokine receptor interaction;>>Cell adhesion molecules;>>Antigen processing and presentation;>>Hematopoietic cell lineage;>>Th1 and Th2 cell differentiation;>>Th17 cell differentiation;>>T cell receptor signaling pathway;>>Yersinia infection;>>Human T-cell leukemia virus 1 infection;>>Human immunodeficiency virus 1 infection;>>PD-L1 expression and PD-1 checkpoint pathway in cancer;>>Primary immunodeficiency
Gene Name :	CD4
Protein Name :	T-cell surface glycoprotein CD4
Human Gene Id :	920
Human Swiss Prot No :	P01730
Mouse Gene Id :	12504
Mouse Swiss Prot No :	P06332
Rat Gene Id :	24932
Rat Swiss Prot No :	P05540
Immunogen :	Synthetic Peptide of CD4
Specificity :	The antibody detects endogenous CD4 proteins.
Formulation :	PBS, pH 7.4, containing 0.5%BSA, 0.02% sodium azide as Preservative and 50% Glycerol.

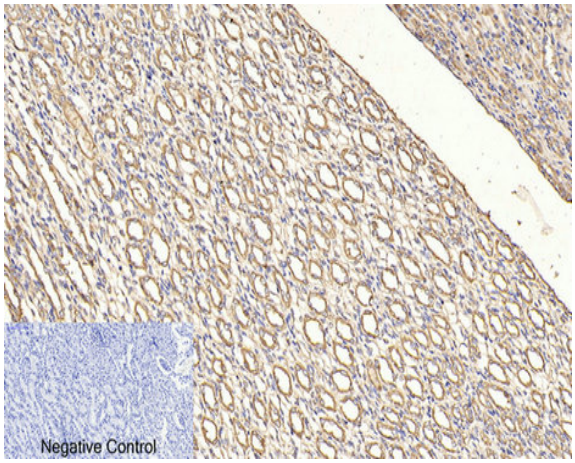
Source :	Monoclonal, Mouse
Dilution :	IHC 1:200
Purification :	The antibody was affinity-purified from mouse ascites by affinity-chromatography using specific immunogen.
Storage Stability :	-15°C to -25°C/1 year(Do not lower than -25°C)
Molecularweight :	51kD
Cell Pathway :	Cell adhesion molecules (CAMs);Antigen processing and presentation;Hematopoietic cell lineage;T_Cell_Receptor;Primary immunodeficiency;
Background :	This gene encodes a membrane glycoprotein of T lymphocytes that interacts with major histocompatibility complex class II antigenes and is also a receptor for the human immunodeficiency virus. This gene is expressed not only in T lymphocytes, but also in B cells, macrophages, and granulocytes. It is also expressed in specific regions of the brain. The protein functions to initiate or augment the early phase of T-cell activation, and may function as an important mediator of indirect neuronal damage in infectious and immune-mediated diseases of the central nervous system. Multiple alternatively spliced transcript variants encoding different isoforms have been identified in this gene. [provided by RefSeq, Aug 2010],
Function :	function:Accessory protein for MHC class-II antigen/T-cell receptor interaction. May regulate T-cell activation. Induces the aggregation of lipid rafts.,miscellaneous:Primary receptor for HIV-1.,online information:CD4 entry,PTM:Palmitoylation and association with LCK contribute to the enrichment of CD4 in lipid rafts.,similarity:Contains 1 Ig-like V-type (immunoglobulin-like) domain.,similarity:Contains 3 Ig-like C2-type (immunoglobulin-like) domains.,subcellular location:Localizes to lipid rafts. Removed from plasma membrane by HIV-1 Nef protein that increases clathrin-dependent endocytosis of this antigen to target it to lysosomal degradation. Cell surface expression is also down-modulated by HIV-1 Envelope polyprotein gp160 that interacts with, and sequesters CD4 in the endoplasmic reticulum.,subunit:Associates with LCK. Binds to HIV-1 gp120 and to P4HB/PDI and upon HIV-1 binding to t
Subcellular Location :	Cell membrane ; Single-pass type I membrane protein . Localizes to lipid rafts (PubMed:12517957, PubMed:9168119). Removed from plasma membrane by HIV-1 Nef protein that increases clathrin-dependent endocytosis of this antigen to target it to lysosomal degradation. Cell surface expression is also down-modulated by HIV-1 Envelope polyprotein gp160 that interacts with, and sequesters CD4 in the endoplasmic reticulum.
Expression :	Highly expressed in T-helper cells. The presence of CD4 is a hallmark of T-

helper cells which are specialized in the activation and growth of cytotoxic T-cells, regulation of B cells, or activation of phagocytes. CD4 is also present in other immune cells such as macrophages, dendritic cells or NK cells.

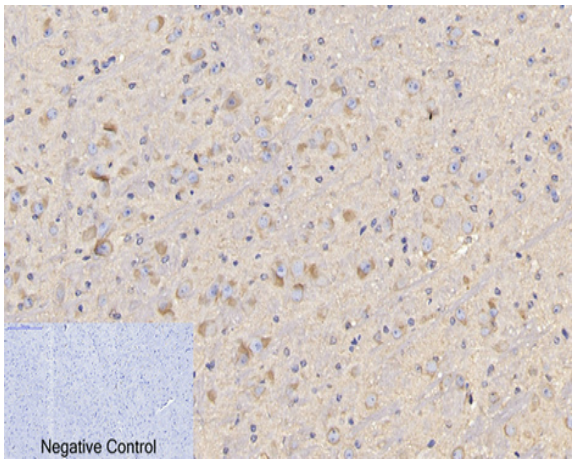
Products Images



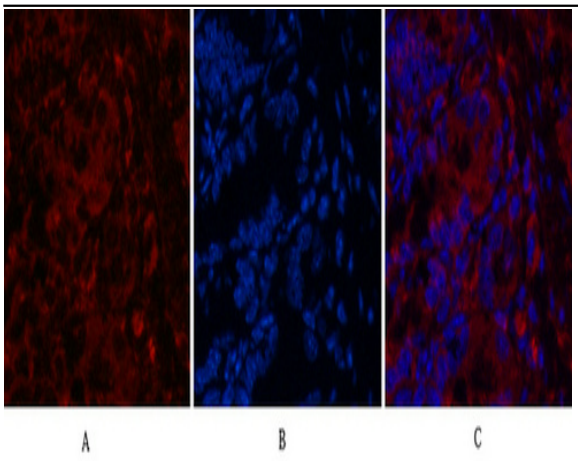
Immunohistochemical analysis of paraffin-embedded Human-stomach tissue. 1,CD4 Monoclonal Antibody(11A1) was diluted at 1:200(4°C,overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98°C,20min). 3,Secondary antibody was diluted at 1:200(room tempeRature, 30min). Negative control was used by secondary antibody only.



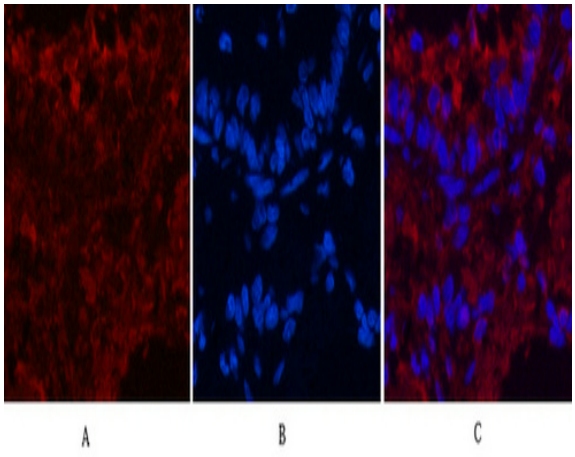
Immunohistochemical analysis of paraffin-embedded Rat-kidney tissue. 1,CD4 Monoclonal Antibody(11A1) was diluted at 1:200(4°C,overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98°C,20min). 3,Secondary antibody was diluted at 1:200(room tempeRature, 30min). Negative control was used by secondary antibody only.



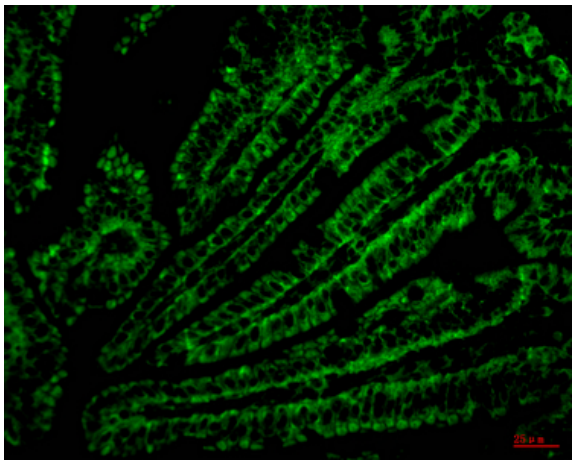
Immunohistochemical analysis of paraffin-embedded Mouse-brain tissue. 1,CD4 Monoclonal Antibody(11A1) was diluted at 1:200(4°C,overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98°C,20min). 3,Secondary antibody was diluted at 1:200(room tempeRature, 30min). Negative control was used by secondary antibody only.



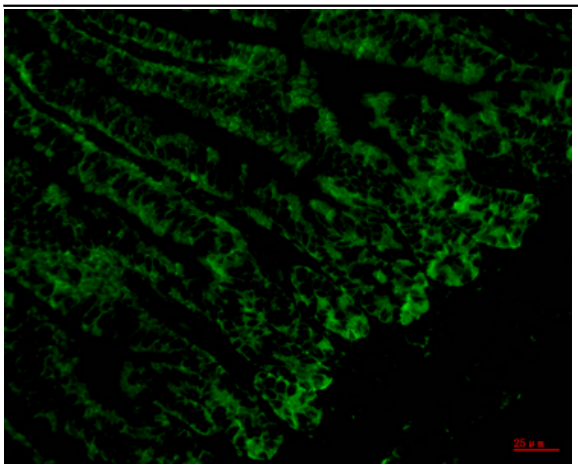
Immunofluorescence analysis of Mouse-colon tissue. 1,CD4 Monoclonal Antibody(11A1)(red) was diluted at 1:200(4°C,overnight). 2, Cy3 labled Secondary antibody was diluted at 1:300(room temperature, 50min).3, Picture B: DAPI(blue) 10min. Picture A:Target. Picture B: DAPI. Picture C: merge of A+B



Immunofluorescence analysis of Rat-lung tissue. 1,CD4 Monoclonal Antibody(11A1)(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



Immunofluorescence analysis of paraffin-embedded Mouse Colonic tissue



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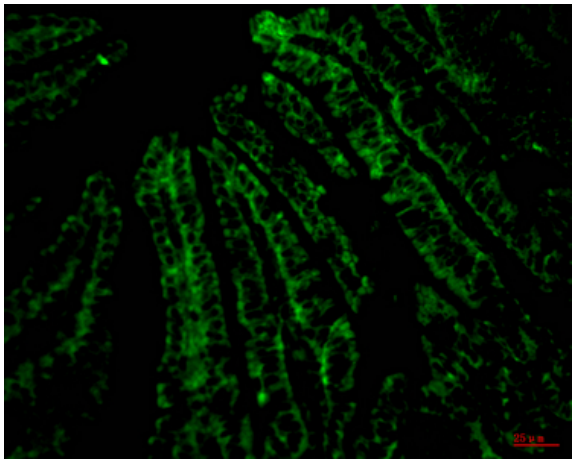
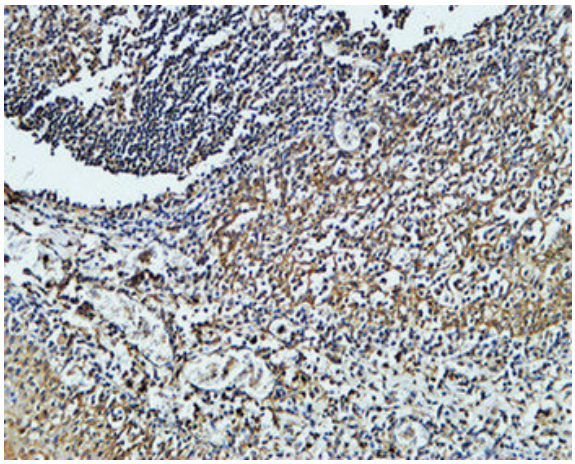
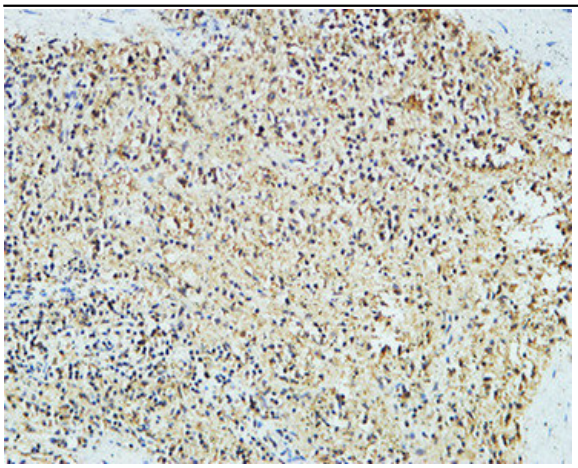


Immunofluorescence analysis of paraffin-embedded Mouse Colonic tissue



Immunohistochemical analysis of paraffin-embedded Human Amygdala. 1, Antibody was diluted at 1:400(4° overnight). 2, High-pressure and temperature EDTA, pH8.0 was used for antigen retrieval. 3,Secondary antibody was diluted at 1:200(room temperature, 30min).



Immunohistochemical analysis of paraffin-embedded Human pancreas. 1, Antibody was diluted at 1:200(4° overnight). 2, High-pressure and temperature EDTA, pH8.0 was used for antigen retrieval. 3,Secondary antibody was diluted at 1:200(room temperature, 30min).