



Rabbit Anti-Integrin beta 1 antibody

SL0486R

Product Name Integrin beta 1**Chinese Name** 整合素 β 1 (CD29) 抗体**Alias** Integrin beta-1; beta 1 subunit; CD 29; CD-29; CD29; CD29 antigen; Fibrinogen Receptor beta subunit; Fibronectin receptor subunit beta; Fibronectin receptor, beta subunit; FNRB; GPIIA; GP IIa; Integrin VLA 4 subunit beta; ITGB; ITGB1; ITGB 1; MDF2; MSK12; Very Late Activation Protein beta Polypeptide; Glycoprotein IIa; Integrin VLA 4 subunit beta; integrin VLA-4 beta subunit; ITB1_HUMAN; very late activation protein, beta polypeptide; VLA BETA; VLA-4 subunit beta; VLA-BETA; VLAB; VLAbeta; Integrin β 1.**Research Area** Cell biology immunology Cell adhesion molecule**Immunogen Species** Rabbit**Clonality** Polyclonal**React Species** Human,Mouse,Rat (predicted:Chicken,Dog,Pig,Cow,Horse,Rabbit,Sheep)
WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,Flow-Cyt=1 μ g/Test
(Paraffin sections need antigen repair)**Applications** not yet tested in other applications.
optimal dilutions/concentrations should be determined by the end user.**Theoretical molecular weight** 88kDa**Detection molecular weight** 130kD**Cellular localization** cytoplasmic The cell membrane**Form** Liquid**Concentration** 1mg/ml**immunogen** KLH conjugated synthetic peptide derived from human Integrin beta 1: 25-100/798
<Extracellular>**Lsotype** IgG

Purification	affinity purified by Protein A
Buffer Solution	1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.
Storage	Shipped at 4°C. Store at -20 °C 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 Integrins alpha-1/beta-1, alpha-2/beta-1, alpha-10/beta-1 and alpha-11/beta-1 are receptors for collagen. Integrins alpha-1/beta-1 and alpha-2/beta-2 recognize the proline-hydroxylated sequence G-F-P-G-E-R in collagen. Integrins alpha-2/beta-1, alpha-3/beta-1, alpha-4/beta-1, alpha-5/beta-1, alpha-8/beta-1, alpha-10/beta-1, alpha-11/beta-1 and alpha-V/beta-1 are receptors for fibronectin. Alpha-4/beta-1 recognizes one or more domains within the alternatively spliced CS-1 and CS-5 regions of fibronectin. Integrin alpha-5/beta-1 is a receptor for fibrinogen. Integrin alpha-1/beta-1, alpha-2/beta-1, alpha-6/beta-1 and alpha-7/beta-1 are receptors for lamimin. Integrin alpha-4/beta-1 is a receptor for VCAM1. It recognizes the sequence Q-I-D-S in VCAM1. Integrin alpha-9/beta-1 is a receptor for VCAM1, cytotactin and osteopontin. It recognizes the sequence A-E-I-D-G-I-E-L in cytotactin. Integrin alpha-3/beta-1 is a receptor for epiligrin, thrombospondin and CSPG4. Alpha-3/beta-1 may mediate with LGALS3 the stimulation by CSPG4 of endothelial cells migration. Integrin alpha-V/beta-1 is a receptor for vitronectin. Beta-1 integrins recognize the sequence R-G-D in a wide array of ligands. Isoform beta-1B interferes with isoform beta-1A resulting in a dominant negative effect on cell adhesion and migration (in vitro). In case of HIV-1 infection, the interaction with extracellular viral Tat protein seems to enhance angiogenesis in Kaposi's sarcoma lesions.
Product Detail	Function: Integrins alpha-1/beta-1, alpha-2/beta-1, alpha-10/beta-1 and alpha-11/beta-1 are receptors for collagen. Integrins alpha-1/beta-1 and alpha-2/beta-2 recognize the proline-hydroxylated sequence G-F-P-G-E-R in collagen. Integrins alpha-2/beta-1, alpha-3/beta-1, alpha-4/beta-1, alpha-5/beta-1, alpha-8/beta-1, alpha-10/beta-1, alpha-11/beta-1 and alpha-V/beta-1 are receptors for fibronectin. Alpha-4/beta-1 recognizes one or more domains within the alternatively spliced CS-1 and CS-5 regions of fibronectin. Integrin alpha-5/beta-1 is a receptor for fibrinogen. Integrin alpha-1/beta-1, alpha-2/beta-1, alpha-6/beta-1 and alpha-7/beta-1 are receptors for lamimin. Integrin alpha-4/beta-1 is a receptor for VCAM1. It recognizes the sequence Q-I-D-S in VCAM1. Integrin alpha-9/beta-1 is a receptor for VCAM1, cytotactin and osteopontin. It recognizes the sequence A-E-I-D-G-I-E-L in cytotactin. Integrin alpha-3/beta-1 is a receptor for epiligrin, thrombospondin and CSPG4. Alpha-3/beta-1 may mediate with LGALS3 the stimulation by CSPG4 of endothelial cells migration. Integrin alpha-V/beta-1 is a receptor for vitronectin. Beta-1 integrins recognize the sequence R-G-D in a wide array of ligands. Isoform beta-1B interferes with isoform beta-1A resulting in a dominant negative effect on cell adhesion and migration (in vitro). In case of HIV-1 infection, the interaction with extracellular viral Tat protein seems to enhance angiogenesis in Kaposi's sarcoma lesions.

Subunit:

Heterodimer of an alpha and a beta subunit. Beta-1 associates with either alpha-1, alpha-2, alpha-3, alpha-4, alpha-5, alpha-6, alpha-7, alpha-8, alpha-9, alpha-10, alpha-11 or alpha-V. Binds LGALS3BP and ITGB1BP3, when associated with alpha-7, but not with alpha-5. Interacts with FLNA, FLNB and RANBP9. Isoform Beta-1D interacts with ACE2. Isoform Beta-1A interacts with the C-terminal region of FLNC. Interacts with KRT1 in the presence of GNB2L1 and SRC. Interacts with HIV-1 Tat. Binds to human echoviruses 1 and 8 capsid proteins and acts as a receptor for these viruses. Interacts with RAB21. Interacts (via the cytoplasmic region) with RAB25 (via the hypervariable C-terminal region). Interacts with FGR and HCK (By similarity). Interacts with MYO10.

Subcellular Location:

Cell membrane; Single-pass type I membrane protein. Melanosome. Cleavage furrow. Note=Isoform beta-1B does not localize to focal adhesions. Highly enriched in stage I melanosomes. Located on plasma membrane of neuroblastoma NMB7 cells. In a lung cancer cell line, in prometaphase and metaphase, localizes diffusely at the membrane and in a few intracellular vesicles. In early telophase, detected mainly on the matrix-facing side of the cells. By mid-telophase, concentrated to the ingressing cleavage furrow, mainly to the basal side of the furrow. In late telophase, concentrated to the extending protrusions formed at the opposite ends of the spreading daughter cells, in vesicles at the base of the lamellipodia formed by the separating daughter cells.

Tissue Specificity:

Isoform beta-1A is widely expressed, other isoforms are generally coexpressed with a more restricted distribution. Isoform beta-1B is expressed in skin, liver, skeletal muscle, cardiac muscle, placenta, umbilical vein endothelial cells, neuroblastoma cells, lymphoma cells, hepatoma cells and astrocytoma cells. Isoform beta-1C and isoform beta-1C-2 are expressed in muscle, kidney, liver, placenta, cervical epithelium, umbilical vein endothelial cells, fibroblast cells, embryonal kidney cells, platelets and several blood cell lines. Isoform beta-C-2, rather than isoform beta-1C, is selectively expressed in peripheral T-cells. Isoform beta-1C is expressed in non-proliferating and differentiated prostate gland epithelial cells and in platelets, on the surface of erythroleukemia cells and in various hematopoietic cell lines. Isoform beta-1D is expressed specifically in striated muscle (skeletal and cardiac muscle).

Post-translational modifications:

The cysteine residues are involved in intrachain disulfide bonds.

Similarity:

Belongs to the integrin beta chain family.
Contains 1 VWFA domain.

SWISS:

P05556

Gene ID:
3688

Database links:

[Entrez Gene: 3688](#) Human

[Entrez Gene: 16412](#) Mouse

[Entrez Gene: 24511](#) Rat

[Omim: 135630](#) Human

[SwissProt: P05556](#) Human

[SwissProt: P09055](#) Mouse

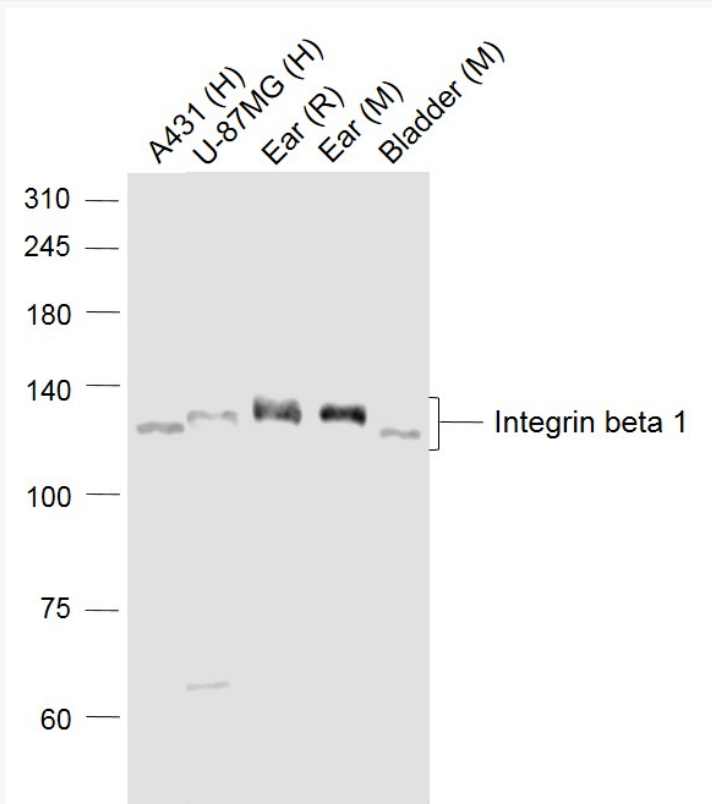
[SwissProt: P49134](#) Rat

[Unigene: 643813](#) Human

[Unigene: 263396](#) Mouse

[Unigene: 25733](#) Rat

**Product
Picture**



Sample:

Lane 1: A431 (Human) Cell Lysate at 30 ug

Lane 2: U-87MG (Human) Cell Lysate at 30 ug

Lane 3: Ear (Rat) Lysate at 40 ug

Lane 4: Ear (Mouse) Lysate at 40 ug

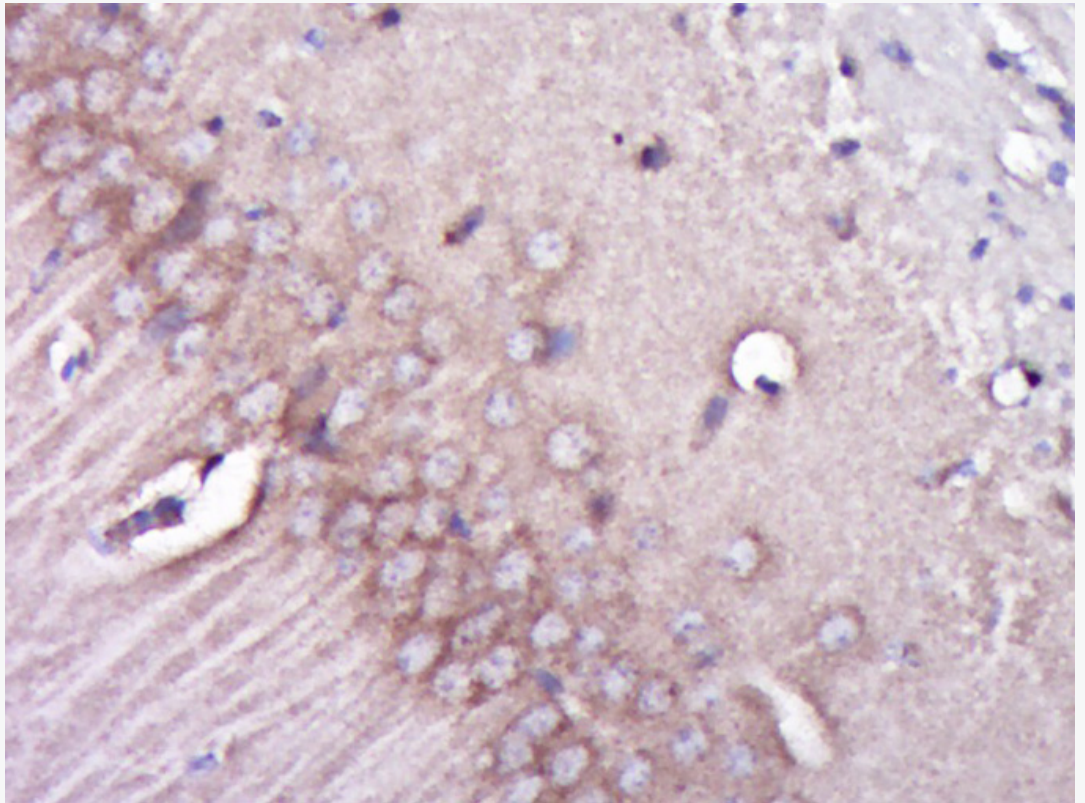
Lane 5: Bladder (Mouse) Lysate at 40 ug

Primary: Anti-Integrin beta 1 (SL0486R) at 1/1000 dilution

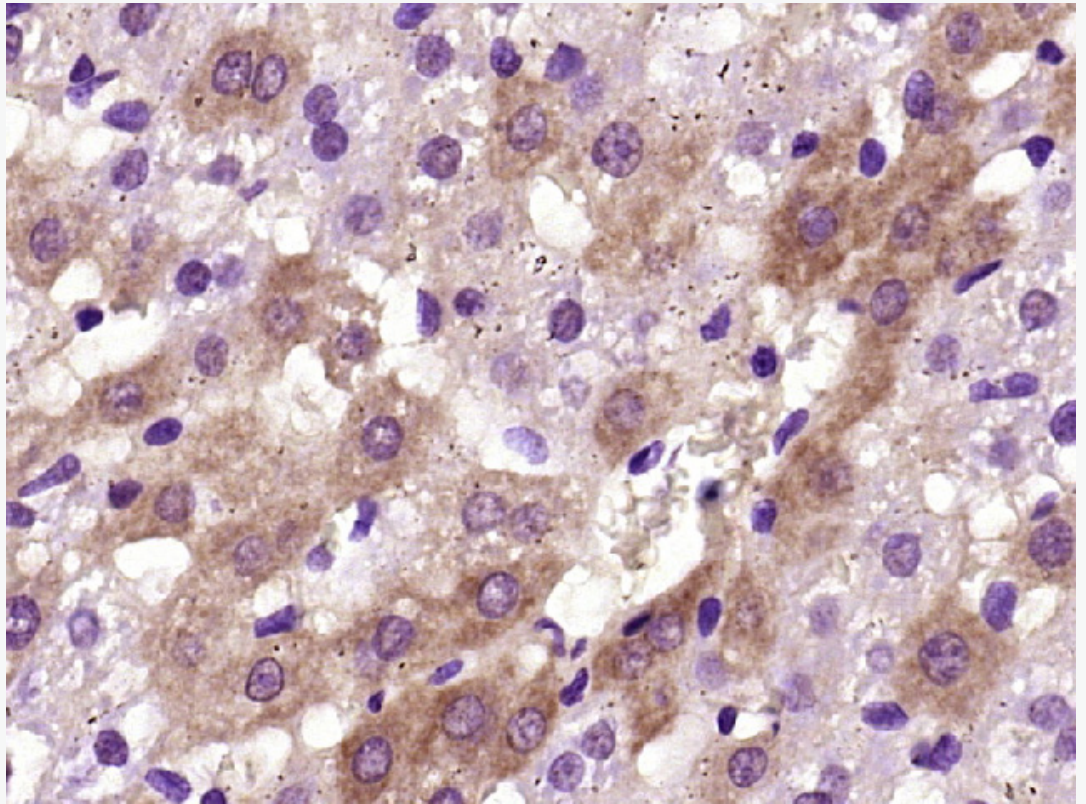
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 130 kD

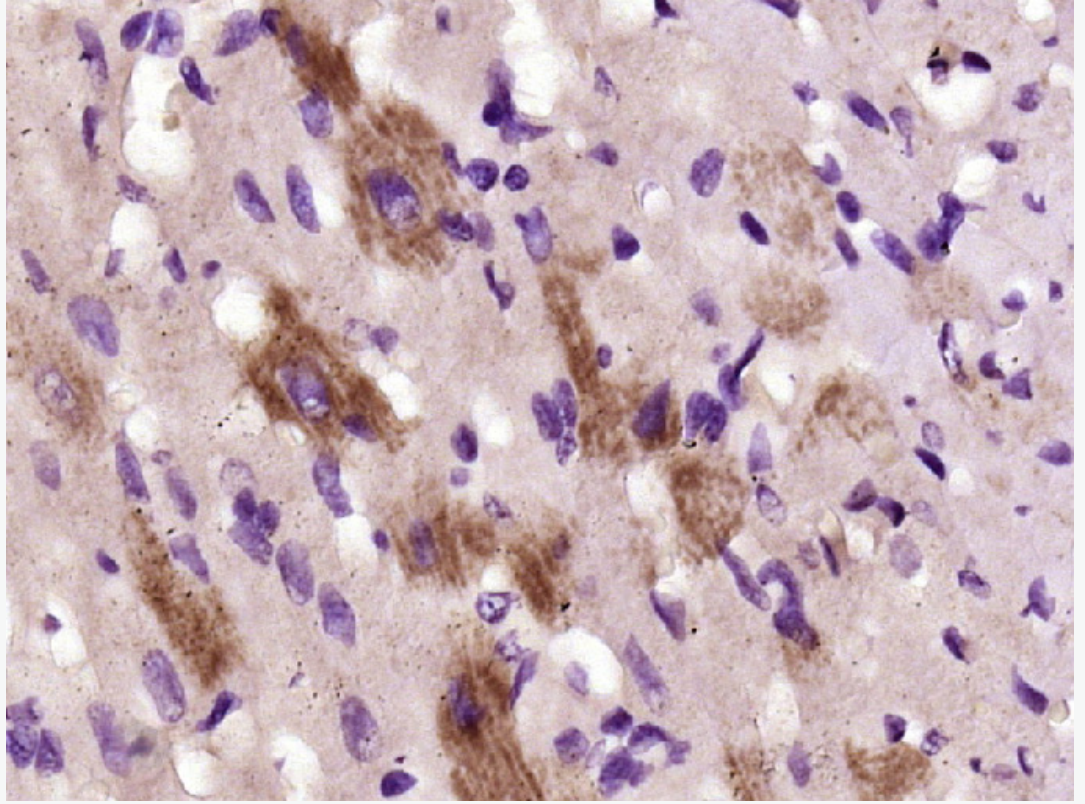
Observed band size: 130 kD



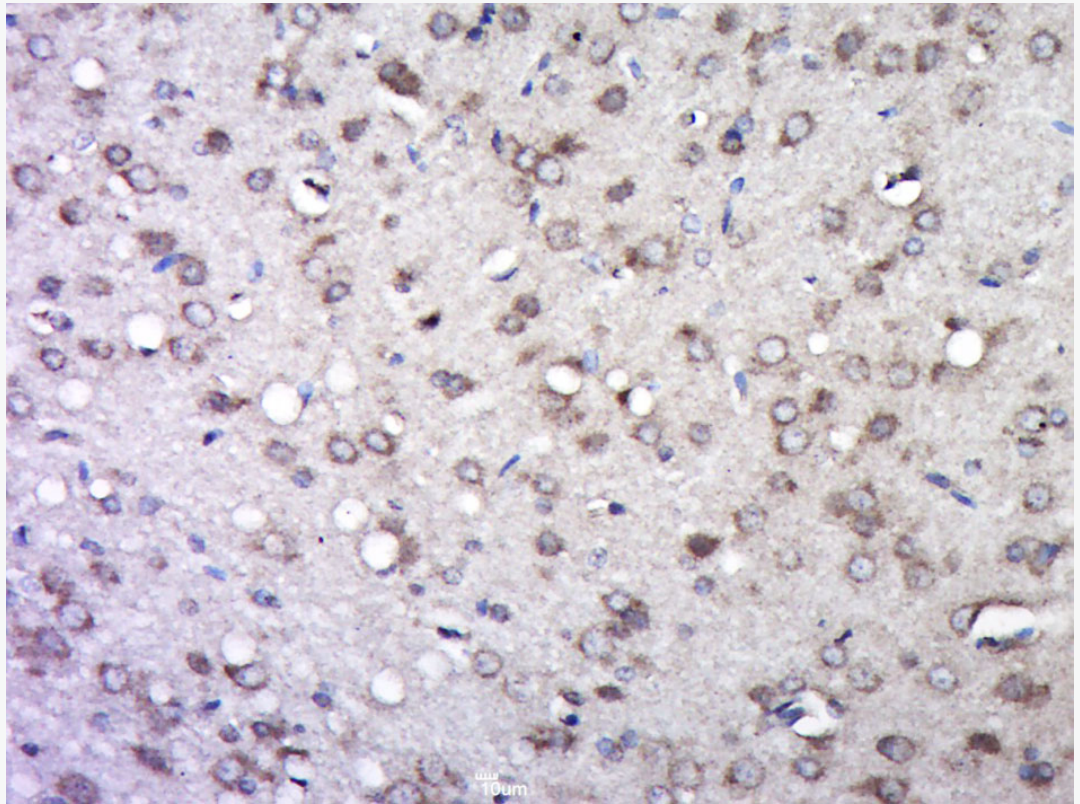
Paraformaldehyde-fixed, paraffin embedded (Mouse brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (Integrin beta 1) Polyclonal Antibody, Unconjugated (SL0486R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.



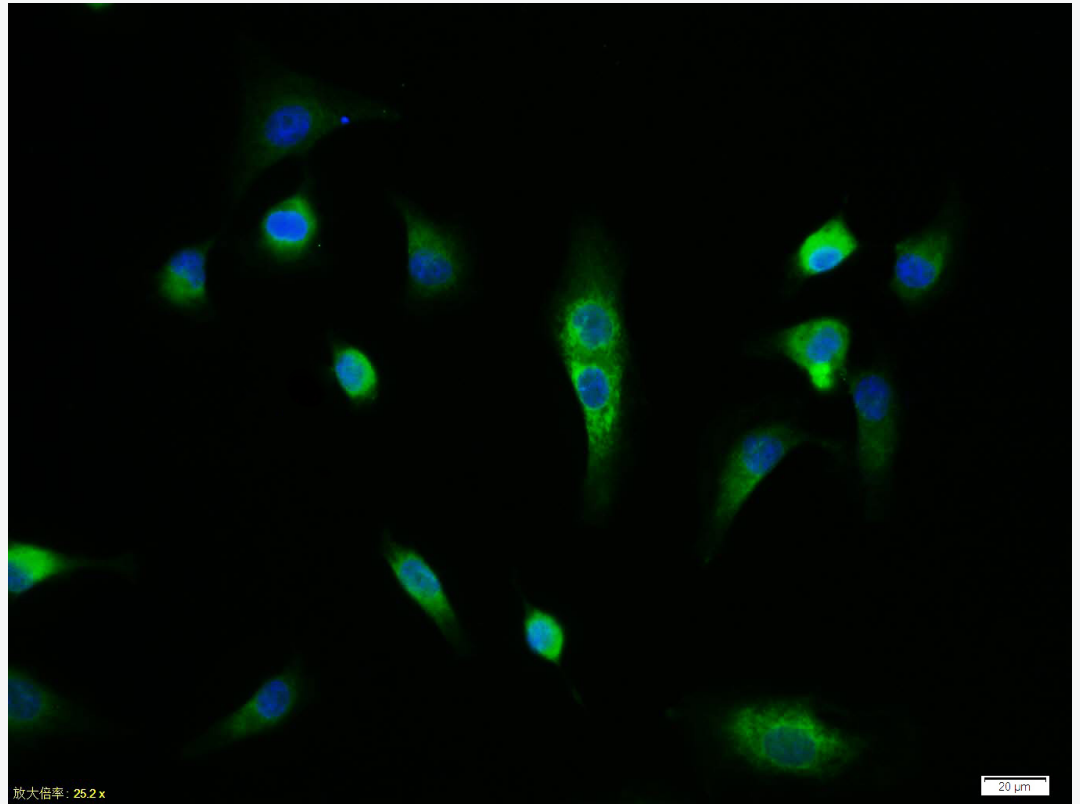
Paraformaldehyde-fixed, paraffin embedded (Rat liver); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (Integrin beta 1) Polyclonal Antibody, Unconjugated (SL0486R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.



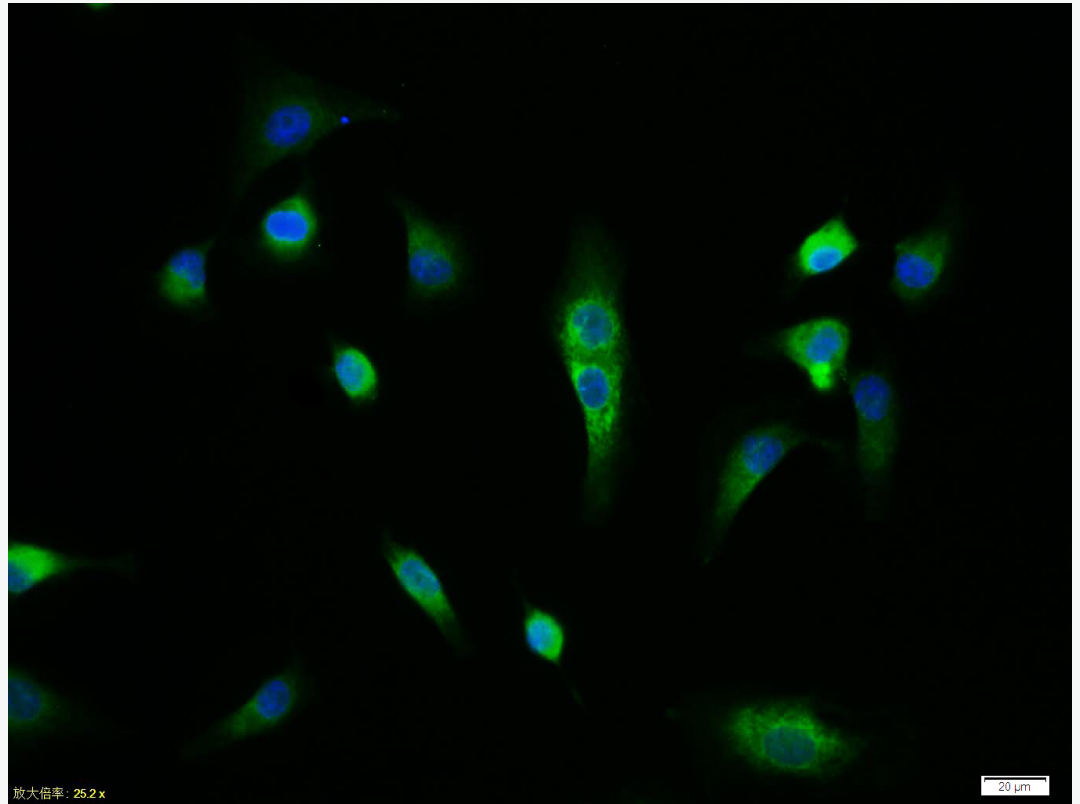
Paraformaldehyde-fixed, paraffin embedded (Rat heart); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (Integrin beta 1) Polyclonal Antibody, Unconjugated (SL0486R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.



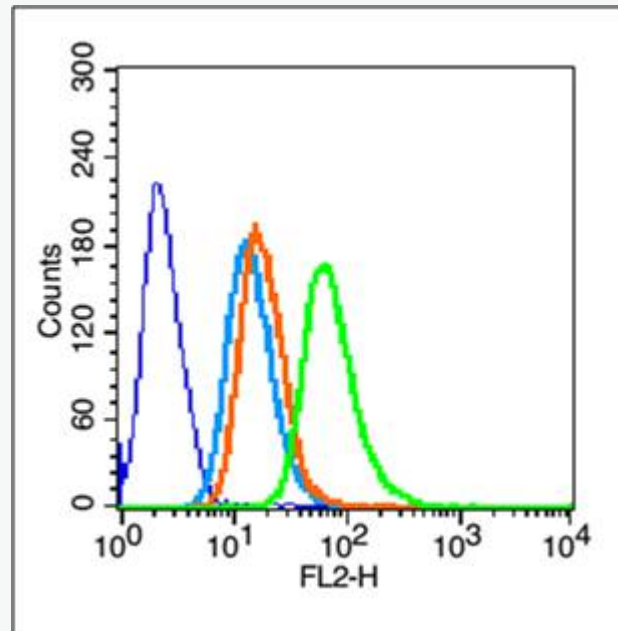
Paraformaldehyde-fixed, paraffin embedded (Rat brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (Integrin beta 1) Polyclonal Antibody, Unconjugated (SL0486R) at 1:500 overnight at 4°C, followed by a conjugated secondary (sp-0023) for 20 minutes and DAB staining.



Tissue/cell:A549 cell; 4% Paraformaldehyde-fixed; Triton X-100 at room temperature for 20 min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min; Antibody incubation with (Integrin beta 1) polyclonal Antibody, Unconjugated (SL0486R) 1:100, 90 minutes at 37°C; followed by a FITC conjugated Goat Anti-Rabbit IgG antibody at 37°C for 90 minutes, DAPI (blue, C02-04002) was used to stain the cell nuclei.



Tissue/cell:A549 cell; 4% Paraformaldehyde-fixed; Triton X-100 at room temperature for 20 min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min; Antibody incubation with (Integrin beta 1) polyclonal Antibody, Unconjugated (SL0486R) 1:100, 90 minutes at 37°C; followed by a FITC conjugated Goat Anti-Rabbit IgG antibody at 37°C for 90 minutes, DAPI (blue, C02-04002) was used to stain the cell nuclei.



Blank control (blue line): Hela (blue).

Primary Antibody (green line): Rabbit Anti-Integrin beta 1 antibody (SL0486R)

Dilution: $1\mu\text{g}/10^6$ cells;

Isotype Control Antibody (orange line): Rabbit IgG .

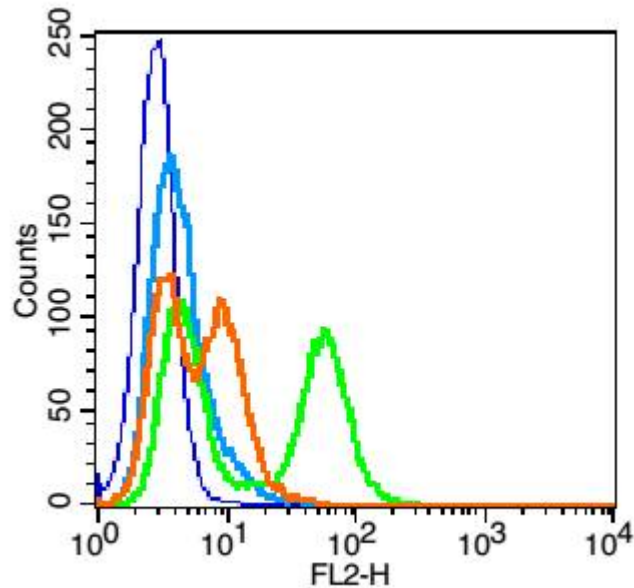
Secondary Antibody (white blue line): Goat anti-rabbit IgG-PE

Dilution: $1\mu\text{g}/\text{test}$.

Protocol

The cells were fixed with 70% methanol (Overnight at 4°C) and then permeabilized with 90% ice-cold methanol for 20 min at -20°C . Cells stained with Primary Antibody for 30 min at room temperature. The cells were then incubated in 1 X PBS/2%BSA/10% goat serum to block non-specific protein-protein interactions followed by the antibody for 15 min at room temperature. The secondary antibody

used for 40 min at room temperature. Acquisition of 20,000 events was performed.



Blank control: HUVEC cells(blue).

Primary Antibody:Rabbit Anti-CD29 antibody(SL0486R), Dilution: 1 μ g in 100 μ L 1X PBS containing 0.5% BSA;

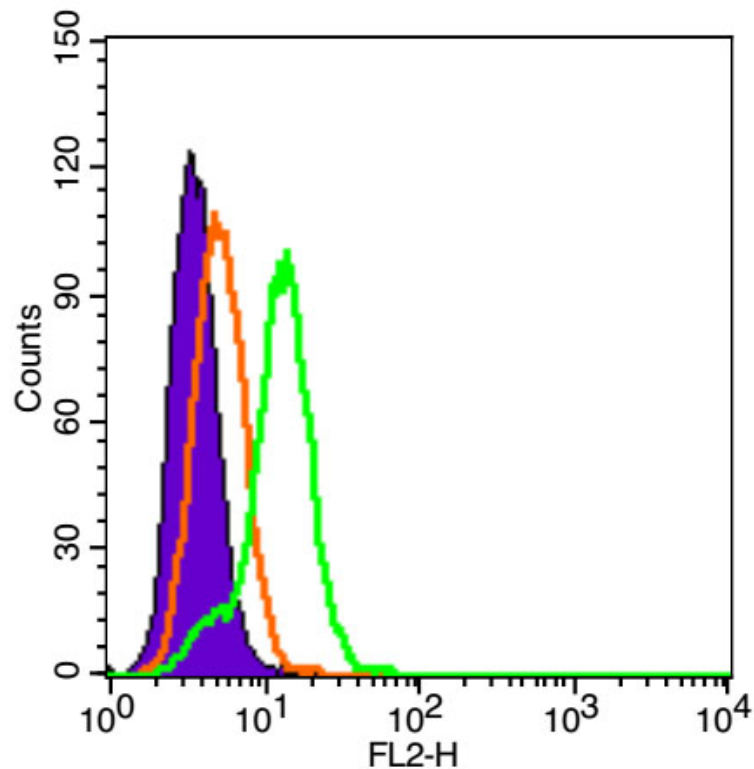
Isotype Control Antibody: Rabbit IgG(orange), used under the same conditions);

Secondary Antibody: Goat anti-rabbit IgG-PE(white blue), Dilution: 1:200 in 1 X PBS containing 0.5% BSA.

Protocol

The cells were fixed with 2% paraformaldehyde (10 min) .Primary antibody (SL0486R, 1 μ g /1x10⁶ cells) were incubated for 30 min on the ice, followed by 1 X PBS containing 0.5% BSA + 1 0% goat serum (15 min) to block non-specific

protein-protein interactions. Then the Goat Anti-rabbit IgG/PE antibody was added into the blocking buffer mentioned above to react with the primary antibody at 1/200 dilution for 30 min on ice. Acquisition of 20,000 events was performed.



Blank control (Black line):HUVEC(Black).

Primary Antibody (green line): Rabbit Anti-Integrin beta 1 antibody (SL0486R)

Dilution: 3 μ g /10⁶ cells;

Isotype Control Antibody (orange line): Rabbit IgG-PE.

Protocol

The cells were fixed with 4% PFA (10min at room temperature)and then 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. Acquisition of 20,000 events was performed.