SunLong Biotech Co.,LTD
Tel: 0086-571-56623320 Fax:0086-571-56623318
E-mail:sales@sunlongbiotech.com
www.sunlongbiotech.com

Rabbit Anti-B7H4 antibody

SL0673R

Product Name	B7H4
Chinese Name	B7-H4 抗体
Alias	B7-H4; B7h4; B7S1; B7x; BC032925; Immune costimulatory protein B7H4; MGC41287; PRO1291; T cell costimulatory molecule B7x; V set domain-containing T cell activation inhibitor 1; VCTN1; VTCN1_HUMAN.
Research Area	Tumour immunology transcriptional regulatory factor
Immunogen Species	Rabbit
Clonality	Polyclonal
React Species	Human, Mouse, Rat, (predicted: Dog,)
Applications	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500 （Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Theoretical molecular weight	28kDa
Cellular localization	The cell membrane
Form	Liquid
Concentration	1mg/ml
immunogen	KLH conjugated synthetic peptide derived from human B7H4: 50-100/282
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℃. 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

B7-H4 protein is expressed on the surface of a variety of immune cells and functions as a negative regulator of T cell responses. While B7-H4 mRNA is widely distributed in mouse and human peripheral tissues, cell surface expression of B7-H4 protein is limited and shows an inducible pattern on hematopoietic cells. Putative receptor of B7-H4 can be upregulated on activated T cells. By arresting cell cycle, B7-H4 ligation of T cells has a profound inhibitory effect on the growth, cytokine secretion, and development of cytotoxicity. Administration of B7-H4Ig into mice impairs antigen-specific T cell responses whereas blockade of endogenous B7-H4 by specific monoclonal antibody promotes T cell responses. B7-H4 thus may participate in negative regulation of cell-mediated immunity in peripheral tissues.

Function:
Negatively regulates T-cell-mediated immune response by inhibiting T-cell activation, proliferation, cytokine production and development of cytotoxicity. When expressed on the cell surface of tumor macrophages, plays an important role, together with regulatory T-cells (Treg), in the suppression of tumor-associated antigen-specific T-cell immunity. Involved in promoting epithelial cell transformation.

Subcellular Location:
cell membrane; Single-pass type I membrane protein (Potential). Note=Expressed at the cell surface. A soluble form has also been detected.

Product Detail

Tissue Specificity:
Overexpressed in breast, ovarian, endometrial, renal cell (RCC) and non-small-cell lung cancers (NSCLC). Expressed on activated T- and B-cells, monocytes and dendritic cells, but not expressed in most normal tissues (at protein level). Widely expressed, including in kidney, liver, lung, ovary, placenta, spleen and testis.

Post-translational modifications:
N-glycosylated.

Similarity:
Belongs to the immunoglobulin superfamily. BTN/MOG family.
Contains 2 Ig-like V-type (immunoglobulin-like) domains.

SWISS:
Q7Z7D3

Gene ID:
79679

Database links:

Entrez Gene: 79679 Human

Entrez Gene: 242122 Mouse

Entrez Gene: 295322 Rat

Omim: 608162 Human

SwissProt: Q7Z7D3 Human

SwissProt: Q7TSP5 Mouse

SwissProt: Q501W4 Rat

Unigene: 546434 Human

Unigene: 137467 Mouse

Unigene: 160956 Rat

B7-H4(B7 Homolog 4)是 B7 家族中的新成员,它能通过抑制 T 细胞的增殖、cell factor 的产生和细胞周期的进程来负性调控 T 细胞的免疫应答,其大量表达 B7-H4 还可以促进 epithelial cells 的恶性转化,保护表皮细胞免于失巢凋亡,在 Tumour 的发生,进展和转归中发挥重要作用.
目前对 B7-H4 信号通路的进一步的研究必将为自身免疫性疾病、病毒感染性疾病和器官移植后排斥反应中 T 细胞介导的免疫应答调控提供了新的途径,同时也为 Tumour 的诊断、治疗提供崭新的前景。

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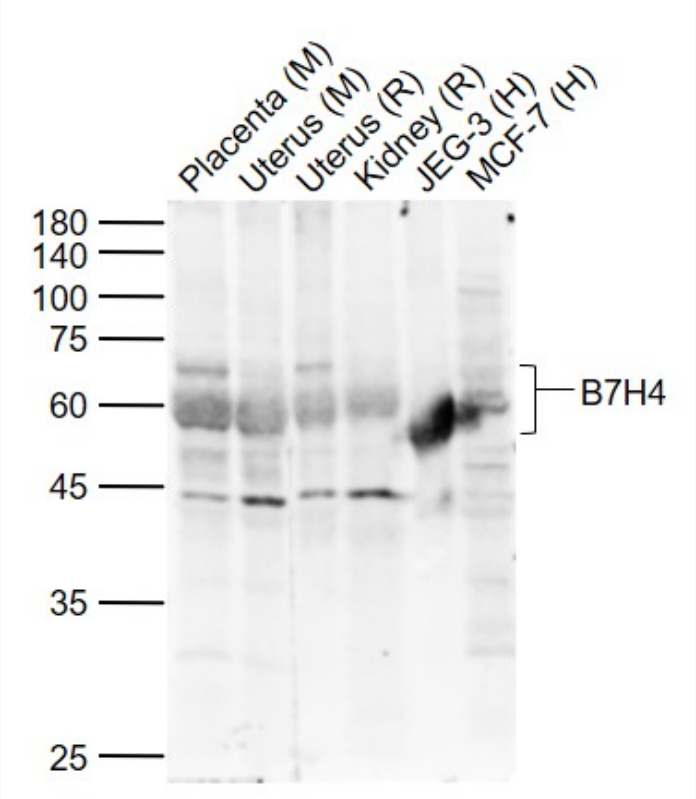
Product Picture



Sample:

Lane 1: Mouse Placenta tissue lysates

Lane 2: Mouse Uterus tissue lysates

Lane 3: Rat Uterus tissue lysates

Lane 4: Rat Kidney tissue lysates

Lane 5: Human JEG-3 cell lysates

Lane 6: Human MCF-7 cell lysates

Primary: Anti-B7H4 (SL0673R) at 1/1000 dilution

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

Predicted band size: 28 kD

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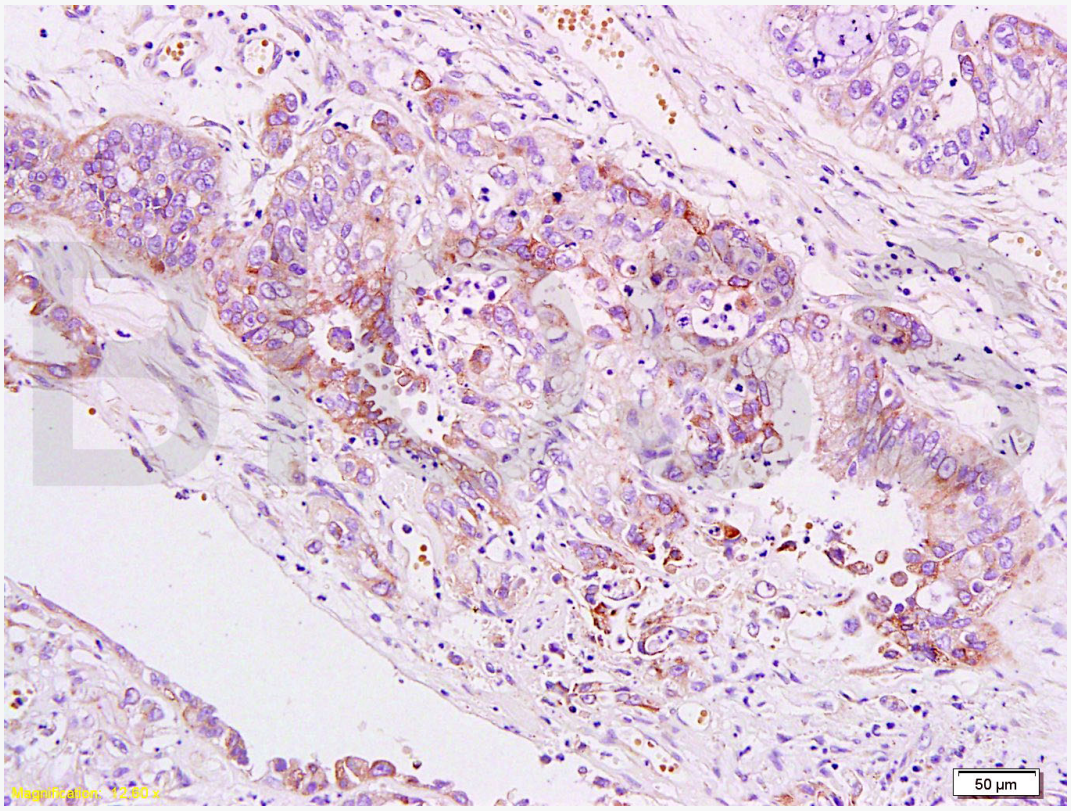
Observed band size: 55-65 kD



Tissue/cell: human colon carcinoma; 4% Paraformaldehyde-fixed and paraffin-embedded;

Antigen retrieval: citrate buffer (1M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min;

Incubation: Anti-B7H4 Polyclonal Antibody, Unconjugated(SL0673R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining

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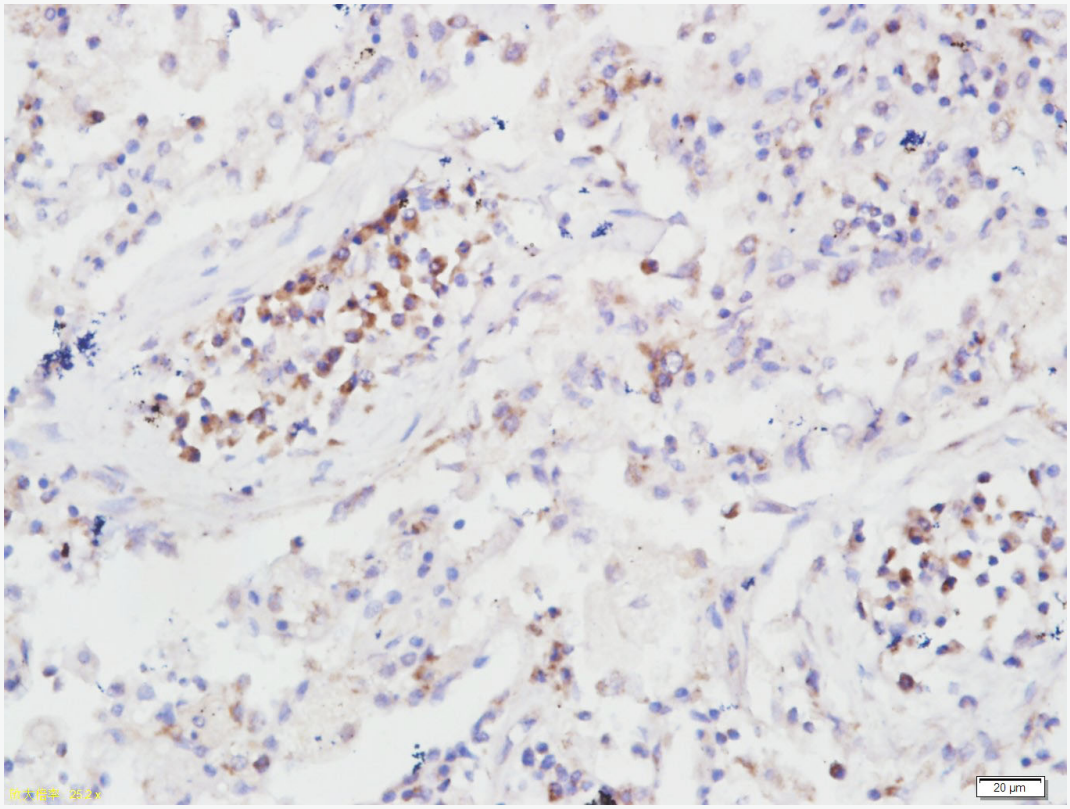

Paraformaldehyde-fixed, paraffin embedded (Human lung cancer); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (B7H4) Polyclonal Antibody, Unconjugated (SL0673R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.

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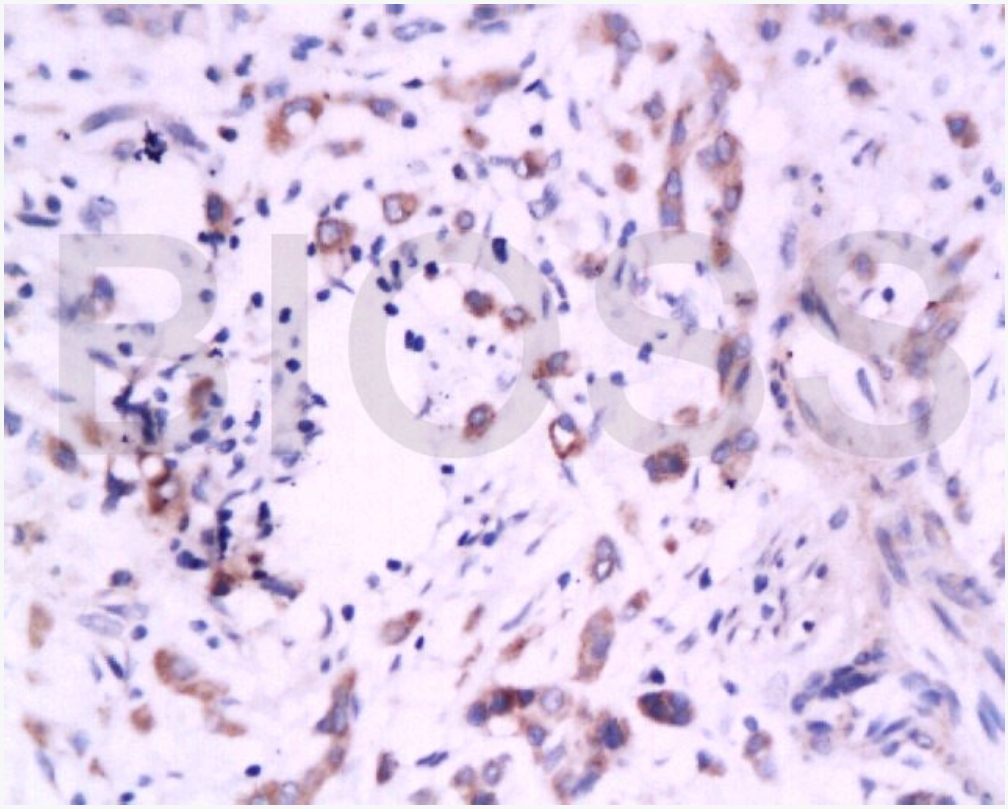

Tissue/cell: human gastric carcinoma; 4% Paraformaldehyde-fixed and paraffin-embedded;

Antigen retrieval: citrate buffer (1M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37℃ for 20 min;

Incubation: Anti-B7H4 Polyclonal Antibody, Unconjugated(SL0673R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining

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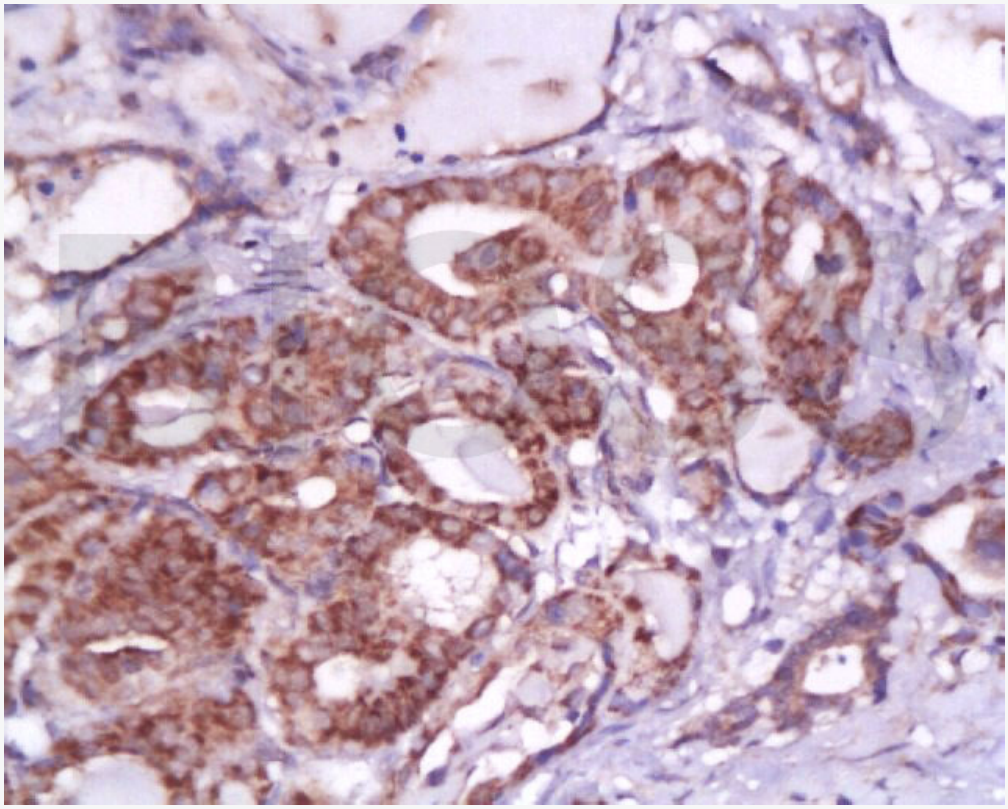

Tissue/cell: human thyroid carcinoma; 4% Paraformaldehyde-fixed and paraffin-embedded;

Antigen retrieval: citrate buffer (1M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37℃ for 20 min;

Incubation: Anti-B7H4 Polyclonal Antibody, Unconjugated(SL0673R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining

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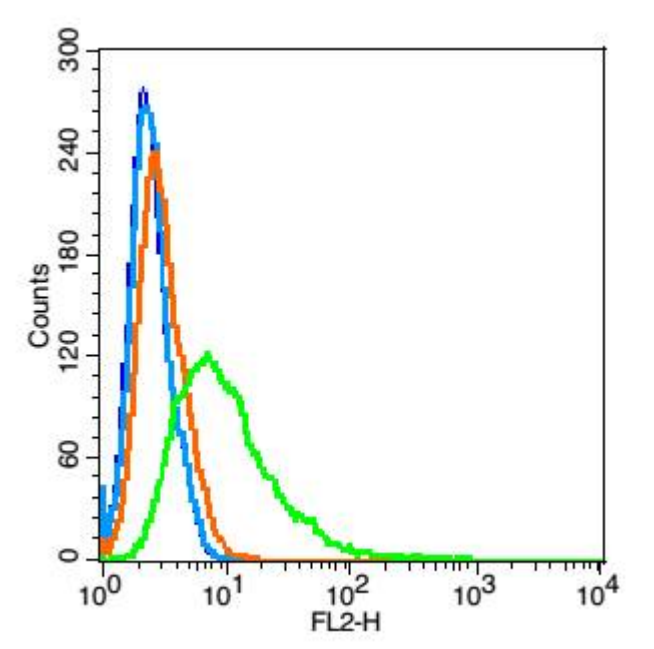

Blank control: Hela(blue).

Primary Antibody:Rabbit Anti-B7H4 antibody(SL0673R), Dilution: 1μg in 100 μL 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). Antibody (SL0673R, 1μg /1x10^6 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

of SL0673R at 1/200 dilution for 30 min on ice. Acquisition of 20,000 events was performed.