

Anti-ICOS Picoband Antibody

Catalog # ABO12822

Product Information

Application	WB, IHC-P, E
Primary Accession	Q9WVS0
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for ICOS detection. Tested with WB, IHC-P, Direct ELISA in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	54167
Other Names	Inducible T-cell costimulator, Activation-inducible lymphocyte immunomediatory molecule, CD28 and CTLA-4-like protein, CCLP, CD28-related protein 1, CRP-1, CD278, Icos, Ailim
Calculated MW	22709
Application Details	Western blot, 0.1-0.5 μ g/ml Immunohistochemistry(Paraffin-embedded Section), 0.5-1 μ g/ml Direct ELISA, 0.1-0.5 μ g/ml
Subcellular Localization	Membrane; Single-pass type I membrane protein.
Tissue Specificity	Expressed on activated T-cells and resting memory T-cells. High expression seen in the thymic medulla and in the germinal centers and T-cell zones of lymph nodes and Peyer patches. Expressed at low levels in the spleen.
Source	Eukaryota
Contents	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg NaN ₃ .
Immunogen	E. coli-derived mouse ICOS recombinant protein (Position: E21-S200).
Cross Reactivity	No cross reactivity with other proteins.
Storage	At -20° C; for one year. After r° Constitution, at 4° C; for one month. It° Can also be aliquotted and stored frozen at -20° C; for a longer time. Avoid

repeated freezing and thawing.

Protein Information

Name	Icos
Synonyms	Ailim
Function	Stimulatory receptor expressed in activated or antigen- experienced T-cells that plays an important role in the immune response (PubMed: 11343123). Upon binding to its ligand ICOSL expressed on antigen presenting cells (APCs), delivers costimulatory signals that enhances all basic T-cell responses to a foreign antigen, namely proliferation, secretion of lymphokines including IL10, up-regulation of molecules that mediate cell-cell interaction, and effective help for antibody secretion by B-cells (PubMed: 10657606). Also acts as a costimulatory receptor critical for the differentiation of T follicular regulatory cells upon immune challenges such as viral infection (PubMed: 36754569). Mechanistically, potentiates TCR-induced calcium flux by augmenting PLCG1 activation and actin remodeling (PubMed: 27693916). In addition, activates PI3K signaling pathways independently of calcium flux (PubMed: 19915142 , PubMed: 27693916). Essential both for efficient interaction between T and B-cells and for normal antibody responses to T-cell dependent antigens. Prevents the apoptosis of pre-activated T-cells. Plays a critical role in CD40- mediated class switching of immunoglobulin isotypes (PubMed: 11343122).
Cellular Location	Cell membrane {ECO:0000250 UniProtKB:Q9Y6W8}; Single-pass type I membrane protein
Tissue Location	Expressed on activated T-cells and resting memory T-cells. High expression seen in the thymic medulla and in the germinal centers and T-cell zones of lymph nodes and Peyer patches. Expressed at low levels in the spleen.

Background

Inducible T-cell costimulator is an immune checkpoint protein that in humans is encoded by the ICOS gene. The protein encoded by this gene belongs to the CD28 and CTLA-4 cell-surface receptor family. It forms homodimers and plays an important role in cell-cell signaling, immune responses, and regulation of cell proliferation.

Images

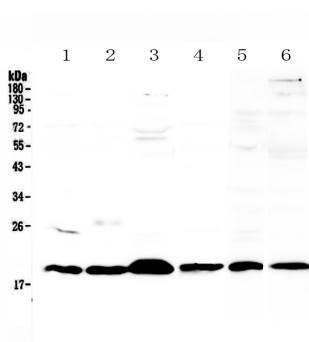


Figure 1. Western blot analysis of ICOS using anti-ICOS antibody (ABO12822). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: mouse stomach tissue lysates, Lane 2: mouse spleen tissue lysates, Lane 3: mouse thymus tissue lysates, Lane 4: mouse small intestine tissue lysates, Lane 5: rat thymus tissue lysates, Lane 6: human placenta tissue lysates. After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-ICOS antigen affinity purified

polyclonal antibody (Catalog # ABO12822) at 0.5 μ g/mL overnight at 4 $^{\circ}$ C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for ICOS at approximately 20KD. The expected band size for ICOS is at 22KD.

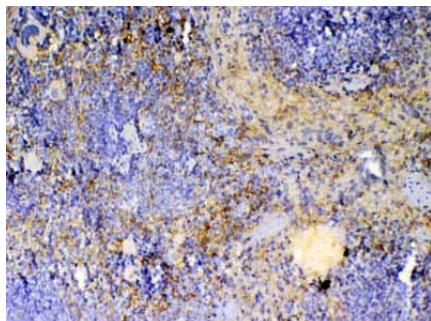


Figure 2. IHC analysis of ICOS using anti-ICOS antibody (ABO12822). ICOS was detected in paraffin-embedded section of mouse spleen tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 μ g/ml rabbit anti-ICOS Antibody (ABO12822) overnight at 4 $^{\circ}$ C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 $^{\circ}$ C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.

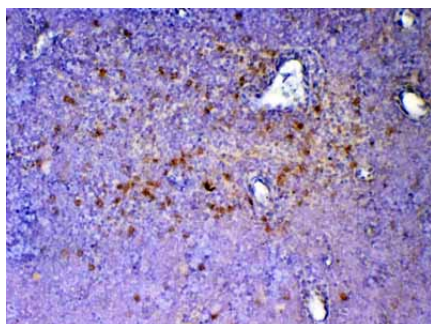


Figure 3. IHC analysis of ICOS using anti-ICOS antibody (ABO12822). ICOS was detected in paraffin-embedded section of mouse thymus tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 μ g/ml rabbit anti-ICOS Antibody (ABO12822) overnight at 4 $^{\circ}$ C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 $^{\circ}$ C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.

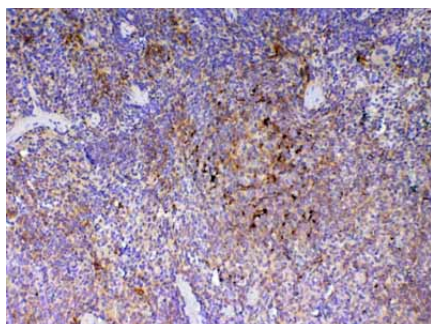


Figure 4. IHC analysis of ICOS using anti-ICOS antibody (ABO12822). ICOS was detected in paraffin-embedded section of rat spleen tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 μ g/ml rabbit anti-ICOS Antibody (ABO12822) overnight at 4 $^{\circ}$ C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 $^{\circ}$ C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.