

## Anti-CD97 antigen CD97 Antibody

Catalog Number: A02982

### Introduction

CD3epsilon is a 20kD chain, which together with CD3lambda, CD3delta, and CD3zeta, and a T cell receptor (alpha/beta or gamma/delta) form the CD3/T-cell receptor complex. It is a specific marker for T lymphocytes, NK T cells, and some thymocytes. Crosslinking of TCR initiates an intracellular signaling cascade resulting in cellular activation and proliferation. The OKT3 antibody has been reported to have potent immunosuppressive properties in vivo and has been proved effective in the treatment of renal, heart, and liver allograft rejection.

This antibody is routinely tested by flow cytometric analysis. Flow cytometry and other applications were tested during antibody development or are reported in the literature.

### Application Information

Each lot of this antibody has been quality control tested by flow cytometric analysis of human PBMCs. For flow cytometric staining, the recommended use of this antibody is  $\leq 0.5\mu\text{g}$  per  $1 \times 10^6$  cells in  $100\mu\text{l}$  of staining volume followed by a secondary fluorescent conjugated anti-mouse antibody. However, it is strongly suggested that the antibody reactivity be empirically titrated for optimal performance in the application of interest.

### About CD97

This antibody is suitable for Cancer, Immunology and Nuclear Signaling research. CD97 is a membrane antigen that is either constitutively expressed or induced by activation on cells of the immune system including colon, thyroid, stomach, and esophagus. One high affinity ligand that has been identified for CD97 is the integrin alpha 5 beta 1. CD97 engagement of endothelial alpha5 beta 1 results in increased angiogenesis. Signals generated through CD97 are thought to result in Rho activation and the regulation of motility. Anti-CD97 is ideal for researchers interested in cancer, angiogenesis, and inflammation.

### Overview

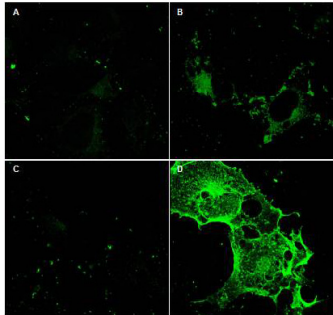
Product Name	Anti-CD97 antigen CD97 Antibody
Reactive Species	Human, Chimpanzee
Description	Boster Bio Anti-CD97 antigen CD97 Antibody (Catalog # A02982). Tested in IF, WB applications. This antibody reacts with Human, Chimpanzee.
Conjugate	Biotin
Application	IF, WB
Clonality	Polyclonal EM-11
Formulation	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2, 0.01% (w/v) Sodium Azide
Storage Instructions	Store vial at 4°C prior to restoration. For extended storage aliquot contents and freeze at -20°C or below. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4°C as an undiluted liquid.

	Dilute only prior to immediate use. Expiration date is one (1) year from date of opening.
Host	Rabbit
Uniprot ID	Q9Z0M6

## Technical Details

Immunogen	This affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a recombinant protein corresponding to amino acids 1-512 (extracellular domain) of mouse CD97 protein.
Predicted Reactive Species	Mouse, Rat
Cross Reactivity	beta-Actin antibody is human, mouse, rat, rabbit, chicken, zebrafish and drosophila reactive.
Isotype	IgG
Form	Lyophilized
Concentration	5.0 mg/mL by UV absorbance at 280 nm
Purification	This Protein A purified antibody is directed against the mouse CD97 protein. The product was protein A purified from monospecific antiserum. A BLAST analysis was used to suggest cross-reactivity with CD97 proteins from mouse (100%) and rat (74%). Only 49% homology is noted for the human homologue. Reactivity against CD97 from other sources is not known.
Suggested Dilutions	<p>Dilute the sample so that the expected range of concentrations fall within the detection range of this kit.</p> <p>If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples.</p> <p>Some PubMed article(s) citing the expression level of this target are as follows:</p> <p>Boster Bio's internal QC testing used:</p> <p>ELISA: 1:10,000 - 1:50,000</p> <p>IF Microscopy: 1:1,000 - 1:5,000</p> <p>WB: 1:1,000 - 1:5,000</p>

## Anti-CD97 antigen CD97 Antibody (A02982) Images



Immunofluorescence Microscopy using Protein A purified anti-CD97 antibody shows staining of Fc-CD97-(5EGF) (panel D) in transfected COS cells. Panel A and C shows similar staining using pre-immune serum. Panel A and B show staining of mock transfected COS cells (no vector). A 1:2,500 dilution of the primary antibody was used. Personal Communication. Yvona Ward. NIH, NCI, CCR, Bethesda, MD.

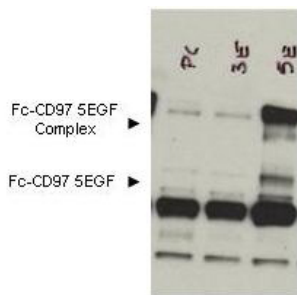


Figure 1. Western blot analysis of CD97 using anti-CD97 antibody (A02982).

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.

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-CD97 antigen affinity purified polyclonal antibody (Catalog # A02982) at 0.5 ug/mL overnight at 4°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 (Catalog # EK1002) with Tanon 5200 system.

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