CD247 polyclonal antibody

Catalog: BS67596 Host: Rabbit Reactivity: Human, Mouse, Rat

BackGround:

When T cells encounter antigens via the T cell receptor (TCR), information about the quantity and quality of antigens is relayed to the intracellular signal transduction machinery . This activation process depends mainly on CD3 (Cluster of Differentiation 3), a multiunit protein complex that directly associates with the TCR. CD3 is composed of four polypeptides: ζ, γ, ε, and δ. Each of these polypeptides contains at least one immunoreceptor tyrosine-based activation motif (ITAM) . Engagement of the TCR complex with foreign antigens induces tyrosine phosphorylation in the ITAM motifs and phosphorylated ITAMs function as docking sites for signaling molecules such as ZAP-70 and the p85 subunit of PI-3 kinase . TCR ligation also induces a conformational change in CD3ε, such that a proline region is exposed and then associates with the adaptor protein Nck .

The CD3ζ invariant chain is a type-I transmembrane protein that exists in the TCR signaling complex as a disulfide-linked homodimer . The cytoplasmic tail of each CD3ζ monomer contains three distinct ITAM motifs, each containing two tyrosine residues. Phosphorylation of CD3ζ ITAM tyrosine residues, including Y142, is driven by recruitment of the Lck and Fyn tyrosine kinases to the TCR . Lck/Fyn-mediated ITAM phosphorylation creates docking sites that promote the SH2 domain-dependent recruitment and activation of ZAP-70 , which drives amplification of signaling events downstream of the TCR that facilitate T cell activation . Phosphorylation of a pool of p16 CD3ζ leads to the generation of p21 and p23 species, which differ in the degree of ITAM phosphorylation. It has been proposed that the ratio of p21/p23 contributes to regulating the amplitude of T cell activation . CD3ζ plays an important role in the assembly and surface expression of the TCR complex. Indeed, research studies have demonstrated that CD3ζ is degraded in response to Ag-dependent TCR stimulation as a mechanism to tightly control T cell activation .

Product:

Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.

Molecular Weight:

~ 18 kDa

Swiss-Prot:

P20963

Purification&Purity:

The antibody was purified by immunogen affinity chromatography.

Applications:

WB (1/500 - 1/1000), IHC (1/50 - 1/200)

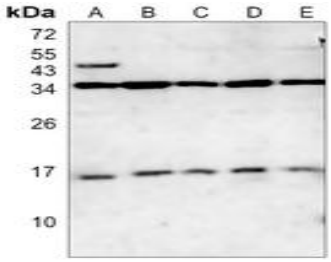
Storage&Stability:

Store at 4℃ short term. Aliquot and store at -20℃ long term. Avoid freeze-thaw cycles.

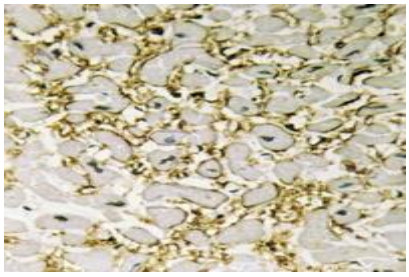
Specificity:

Recognizes endogenous levels of CD247 protein.

DATA:



Western blot analysis of CD247 expression in HuT78 (A), mouse spleen (B), mouse lung (C), rat spleen (D), rat lung (E) whole cell lysates.



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Immunohistochemical analysis of CD247 staining in human heart formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

Note:

For research use only, not for use in diagnostic procedure.

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