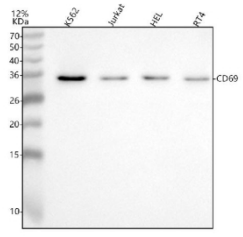
CD69 Antibody (FY12278)

Catalog No.	Formulation	Size
FY12278	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q07108
Applications	Western Blot : 0.25-0.5ug/ml ELISA : 0.1-0.5ug/ml
Limitations	This CD69 antibody is available for research use only.



Western blot analysis of CD69 using anti-CD69 antibody. Lane 1: human K562 whole cell lysates, Lane 2: human Jurkat whole cell lysates, Lane 3: human HEL whole cell lysates, Lane 4: human RT4 whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA 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-CD69 antibody at 0.5 ug/ml overnight at 4oC, 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 1:5000 for 1.5 hour at RT. The signal was developed using enhanced chemiluminescent. The expected band size for CD69 is at 23 kDa but may be observed at higher molecular weights due to glycosylation.

Description

CD69 antibody detects Early activation antigen CD69, encoded by the CD69 gene on chromosome 12p13.31. CD69 antibody is widely used in immunology research as CD69 is one of the earliest markers of lymphocyte activation. CD69 is a type II transmembrane C-type lectin receptor expressed on T cells, B cells, NK cells, and other leukocytes shortly after stimulation. It functions in immune regulation, signaling, and tissue retention of lymphocytes, making it a key marker of

immune activation and inflammation.

Structurally, CD69 is a ~28-32 kDa disulfide-linked homodimer composed of an extracellular C-type lectin-like domain, a transmembrane region, and a short cytoplasmic tail. The lectin domain mediates protein interactions, while the transmembrane region associates with signaling molecules. CD69 is rapidly upregulated at the cell surface following antigen recognition or cytokine stimulation, making it a sensitive marker of early activation.

Functionally, CD69 regulates immune cell proliferation, cytokine production, and migration. It modulates signaling pathways downstream of the T cell receptor and integrins. Importantly, CD69 binds sphingosine-1-phosphate receptor 1 (S1PR1) and promotes its internalization, reducing lymphocyte egress from lymphoid organs. Through this mechanism, CD69 contributes to tissue retention of immune cells during immune responses. Researchers use CD69 antibody to study lymphocyte activation, tissue homing, and inflammation.

Clinically, CD69 is an important biomarker of immune activation in infection, autoimmune disease, and cancer. Elevated CD69 expression is associated with autoimmune pathologies such as lupus and rheumatoid arthritis. It has also been used to monitor immune responses in HIV infection and cancer immunotherapy. In oncology, tumor-infiltrating lymphocytes expressing CD69 often indicate active immune engagement. NSJ Bioreagents provides CD69 antibody for immunology, oncology, and translational research applications.

Experimentally, CD69 antibody is widely used in flow cytometry to monitor lymphocyte activation, in immunohistochemistry to study tissue infiltration, and in western blotting to confirm expression. Functional assays using CD69 antibody help evaluate lymphocyte responses to antigenic or cytokine stimuli.

Application Notes

Optimal dilution of the CD69 antibody should be determined by the researcher.

Immunogen

E.coli-derived human CD69 recombinant protein (Position: M1-K199) was used as the immunogen for the CD69 antibody.

Storage

After reconstitution, the CD69 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.