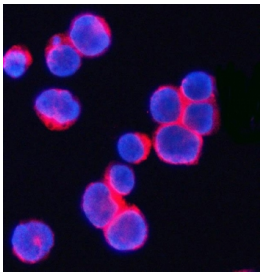
CD3 Gamma Antibody / T-Cell Receptor Complex Antibody (RQ8022)

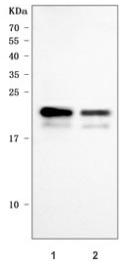
Catalog No.	Formulation	Size
RQ8022	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

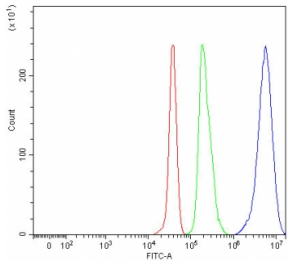
Availability	1-3 business days
Species Reactivity	Human
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	P09693
Localization	Cell membrane
Applications	Western blot: 0.5-1ug/ml Immunofluorescence: 5ug/ml Flow cytometry: 1-3ug/million cells Direct ELISA: 0.1-0.5ug/ml Immunohistochemistry (FFPE): 2-5ug/ml
Limitations	This CD3 Gamma Antibody / T-Cell Receptor Complex Antibody is available for research use only.



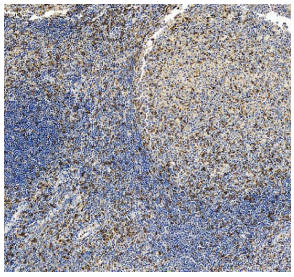
CD3 Gamma Antibody Human JK Cell IF. Immunofluorescent staining of FFPE human JK cells with CD3 gamma antibody (red). Heat-induced epitope retrieval (HIER) was performed by steaming sections in pH 6 citrate buffer for 20 minutes prior to staining. Nuclei are counterstained with DAPI (blue). CD3 gamma immunoreactivity is observed predominantly along the cell membrane, consistent with the expected localization of this T-cell receptor complex protein involved in antigen recognition and T-cell activation.



CD3 Gamma Antibody Human T-Cell WB. Western blot testing of 1) human MOLT4 and 2) human Jurkat cell lysates with CD3 gamma antibody. A single band is detected at approximately 21 kDa in both T-cell lysates, consistent with the predicted molecular weight of CD3 gamma. The results demonstrate specific detection of this T-cell receptor complex protein, which plays an essential role in antigen recognition and T-cell activation.



CD3 Gamma Antibody Human JK FACS. Flow cytometric analysis of fixed and permeabilized human JK cells using CD3 gamma antibody at 1 ug/10^6 cells following blocking with goat sera. Red: cells alone. Green: isotype control. Blue: CD3 gamma antibody. The CD3 gamma antibody produces a pronounced rightward shift in fluorescence intensity relative to the isotype control, demonstrating specific detection of this T-cell receptor complex protein involved in antigen recognition and T-cell activation.



CD3 Gamma Antibody Human Tonsil IHC. Immunohistochemical staining of FFPE human tonsil tissue with CD3 gamma antibody at 2 ug/ml. Heat-induced epitope retrieval (HIER) was performed by boiling tissue sections in pH 8 EDTA buffer prior to staining. CD3 gamma immunoreactivity is observed predominantly along the cell membranes and within the cytoplasm of lymphocytes, consistent with the expected localization of this T-cell receptor complex protein involved in antigen recognition and T-cell activation. Cell nuclei are counterstained with hematoxylin (blue).

Description

CD3 Gamma Antibody recognizes CD3 gamma (CD3G), an essential component of the T-cell receptor (TCR)-CD3 complex that mediates antigen recognition and T-cell activation. Together with the CD3 delta, CD3 epsilon, and CD3 zeta chains, CD3 gamma forms the signaling apparatus that transduces activation signals following engagement of the T-cell receptor with peptide-major histocompatibility complex molecules. This signaling cascade initiates T-cell proliferation, cytokine production, differentiation, and effector functions that are critical for adaptive immunity. Consequently, CD3 Gamma Antibody is widely used to investigate T-cell receptor signaling, lymphocyte development, and immune regulation.

CD3 gamma is expressed almost exclusively by T lymphocytes and developing thymocytes, where it is required for proper assembly, surface expression, and stability of the T-cell receptor complex. The cytoplasmic domain of CD3 gamma contains immunoreceptor tyrosine-based activation motifs (ITAMs) that become phosphorylated following antigen recognition, triggering recruitment of downstream signaling proteins including ZAP70, LAT, and additional mediators of T-cell activation. Defects in CD3G expression impair T-cell receptor signaling and immune function, emphasizing its importance in normal T-cell development and adaptive immune responses. As a result, CD3 Gamma Antibody serves as a valuable tool for studies of T-cell biology and immune signaling.

Mutations in the CD3G gene have been associated with primary immunodeficiency disorders characterized by impaired T-cell function, recurrent infections, autoimmune disease, and abnormal immune regulation. Altered T-cell receptor signaling also contributes to hematologic malignancies, chronic inflammatory diseases, transplant rejection, and responses to cancer immunotherapy. Because modulation of T-cell activation has become central to modern immunology and oncology, CD3 gamma continues to be investigated in studies of immune checkpoint biology, adoptive cell therapy, and mechanisms controlling antigen-specific immune responses. CD3 Gamma Antibody is therefore frequently employed in both basic and translational immunology research.

NSJ Bioreagents offers highly validated CD3 Gamma Antibody products for reliable detection of endogenous CD3

gamma in lymphoid tissues and immune cell populations. These antibodies support investigations into T-cell receptor complex assembly, antigen receptor signaling, lymphocyte activation, thymocyte development, and immune-mediated disease while enabling accurate characterization of CD3 gamma expression and localization. Researchers studying adaptive immunity, T-cell signaling, and immunotherapy can rely on CD3 Gamma Antibody for dependable and reproducible results.

Explore our CD Antibodies page for additional antibodies targeting cluster of differentiation proteins involved in T-cell activation, immune signaling and leukocyte biology.

Application Notes

Optimal dilution of the CD3 Gamma Antibody / T-Cell Receptor Complex Antibody should be determined by the researcher.

Immunogen

E. coli-derived recombinant human protein (amino acids Q23-D165) was used as the immunogen for the CD3 gamma antibody.

Storage

After reconstitution, the CD3 gamma antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

CD3G antibody, CD3 gamma chain antibody, T-Cell Surface Glycoprotein CD3 Gamma antibody, T3G antibody, CD3 gamma subunit antibody, T-Cell Receptor CD3 Gamma antibody

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