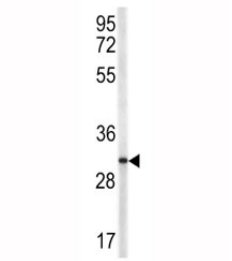
TRAP Antibody / TNF Related Activation Protein Antibody (F49677)

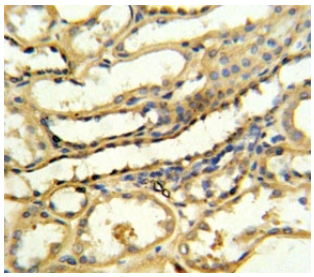
Catalog No.	Formulation	Size
F49677-0.4ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.4 ml
F49677-0.08ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.08 ml

Bulk quote request

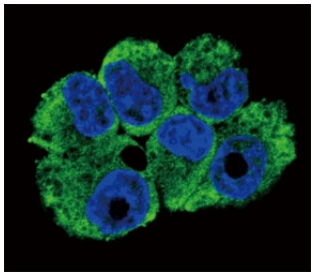
Availability	1-3 business days
Species Reactivity	Human
Predicted Reactivity	Bovine, Pig
Format	Purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Purified
UniProt	P29965
Localization	Cytoplasmic, membranous
Applications	Western blot: 1:1000 IHC (Paraffin): 1:10-1:50 Immunofluorescence: 1:10-1:50 Flow Cytometry: 1:10-1:50
Limitations	This TRAP Antibody / TNF Related Activation Protein Antibody is available for research use only.



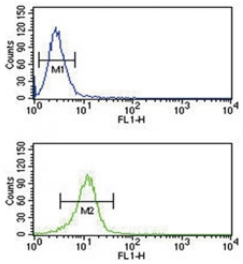
TRAP Antibody Human NCI-H460 Lung Cancer Cell WB. Western blot analysis of human NCI-H460 lung cancer cell lysate using TRAP Antibody / TNF Related Activation Protein Antibody. A band is detected at approximately 30-32 kDa, within the expected 29-39 kDa molecular weight range for glycosylated TRAP/CD40L. The soluble form of the protein has an expected molecular weight of approximately 18 kDa. This TRAP Antibody supports detection of TNF Related Activation Protein in human lung cancer cells.



TRAP Antibody Human Kidney Renal Tubule IHC. Immunohistochemistry staining of formalin-fixed, paraffin-embedded human kidney tissue with TRAP Antibody / TNF Related Activation Protein Antibody. TRAP staining is observed in renal tubular epithelial cells, supporting detection of TNF Related Activation Protein in human kidney tissue.



TRAP Antibody Human NCI-H460 Lung Cancer Cell IF. Immunofluorescence analysis of human NCI-H460 lung cancer cells using TRAP Antibody / TNF Related Activation Protein Antibody followed by Alexa Fluor 488-conjugated goat anti-rabbit IgG (green). Nuclei were counterstained with DAPI (blue), and staining was visualized by confocal microscopy. TRAP staining is detected throughout the cytoplasmic and perinuclear regions of the cells, supporting detection of TNF Related Activation Protein by immunofluorescence.



TRAP Antibody Human NCI-H460 Lung Cancer Cell FACS. Flow cytometry analysis of human NCI-H460 lung cancer cells using TRAP Antibody / TNF Related Activation Protein Antibody followed by FITC-conjugated goat anti-rabbit IgG. TRAP antibody staining is shown in green and the negative control in blue. The fluorescence shift demonstrates detection of TRAP in the NCI-H460 cell population, supporting analysis of TNF Related Activation Protein by flow cytometry.

Description

TRAP Antibody / TNF Related Activation Protein Antibody recognizes TRAP, an immune costimulatory protein more commonly known as CD40 ligand (CD40L) or CD154. Encoded by the CD40LG gene and also designated TNFSF5, TRAP is a member of the tumor necrosis factor ligand superfamily. The protein is expressed prominently following T cell activation and interacts with CD40 on B cells and other antigen-presenting cells. This receptor-ligand interaction provides an important mechanism through which activated T cells regulate other components of the immune response.

TNF Related Activation Protein functions as an important mediator of T cell-dependent B-cell activation. Engagement of CD40 on B cells by TRAP/CD40L contributes to B-cell proliferation and differentiation, immunoglobulin class switching and memory B-cell development. Through these effects, CD40L-CD40 signaling helps coordinate activated T cells with the humoral immune response and is essential for normal antibody-mediated immunity.

TRAP signaling also influences antigen-presenting cells, including dendritic cells and macrophages. CD40 engagement can promote antigen-presenting cell activation and cytokine production, thereby influencing subsequent T-cell responses and inflammatory signaling. The CD40L-CD40 pathway is consequently studied in T-cell activation, B-cell biology, immune costimulation, inflammation, adaptive immunity and immuno-oncology.

The biological importance of this pathway is further demonstrated by disorders involving CD40LG. Pathogenic variants in the X-linked CD40LG gene can impair CD40 signaling and immunoglobulin class switching and are associated with X-linked hyper-IgM syndrome. TRAP, TNF Related Activation Protein, CD154, CD40L and CD40 ligand are historical or alternative names for the same protein, with CD40LG representing the official gene symbol.

A TRAP Antibody can be used to investigate TNF Related Activation Protein expression, CD40L-CD40 interactions, T cell activation and mechanisms regulating B-cell and antigen-presenting cell responses.

TRAP, also known as CD154 and TNFSF5, mediates immune costimulatory signaling through CD40; additional

information on this pathway and target biology is available on the CD40 Ligand Antibody page.

Application Notes

Titration of the TRAP Antibody / TNF Related Activation Protein Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A portion of amino acids 33-62 from the human protein was used as the immunogen for this TRAP antibody.

Storage

Aliquot the TRAP antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Copyright © NSJ Bioreagents. All rights reserved.