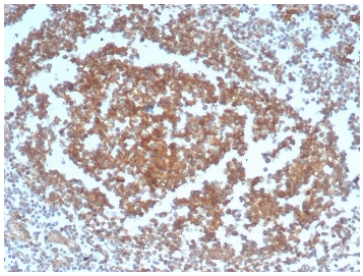
CD40 Antibody Recombinant Rabbit MAb [clone C40/4826R] (V8977)

Catalog No.	Formulation	Size
V8977-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V8977-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V8977SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

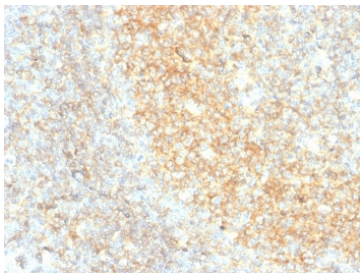
Recombinant RABBIT MONOCLONAL

Bulk quote request

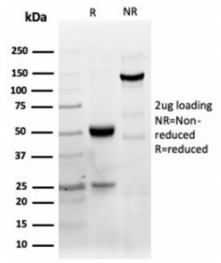
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	C40/4826R
Purity	Protein A/G affinity
UniProt	P25942
Localization	Cell Surface, Secreted
Applications	Western blot: 2-4ug/ml Immunohistochemistry (FFPE): 1-2ug/ml
Limitations	This CD40 antibody is available for research use only.



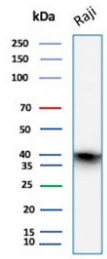
Immunohistochemistry analysis of CD40 Antibody Recombinant Rabbit MAb in human tonsil tissue. FFPE human tonsil shows strong membranous and cytoplasmic HRP-DAB brown staining in lymphoid cells within germinal centers and interfollicular regions, consistent with CD40 expression in B lymphocytes and antigen-presenting cells. Clone C40/4826R was used following heat-induced epitope retrieval by boiling tissue sections in pH 9 10 mM Tris with 1 mM EDTA for 20 minutes and cooling prior to staining.



IHC staining of FFPE human tonsil tissue with CD40 antibody (clone C40/4826R). HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.



SDS-PAGE analysis of purified, BSA-free CD40 antibody (clone C40/4826R) as confirmation of integrity and purity.



Western blot testing of human Raji cell lysate with CD40 antibody. Expected molecular weight is 30-45 kDa depending on glycosylation level.

Description

CD40 antibody recognizes CD40 molecule, also known as Tumor necrosis factor receptor superfamily member 5 antibody and B-cell surface antigen CD40 antibody, a type I transmembrane glycoprotein belonging to the tumor necrosis factor receptor superfamily. CD40 is encoded by the CD40 gene and is predominantly localized to the cell membrane of B lymphocytes, dendritic cells, macrophages, and certain epithelial and endothelial cells. CD40 Antibody Recombinant Rabbit MAb (Clone C40/4826R) targets this immunologically critical receptor involved in adaptive and innate immune signaling.

CD40 plays a central role in humoral immunity. Engagement of CD40 by its ligand CD154, also known as CD40 ligand (CD40L), expressed on activated T helper cells, triggers receptor trimerization and recruitment of TNF receptor-associated factors. This leads to activation of NF-kappaB, MAPK, and PI3K signaling pathways, promoting B-cell proliferation, immunoglobulin class-switch recombination, germinal center formation, and memory B-cell development. In dendritic cells and macrophages, CD40 signaling enhances antigen presentation, cytokine production, and costimulatory molecule expression, thereby amplifying T-cell activation.

CD40 antibody is widely used in research focused on immune regulation, transplantation biology, autoimmunity, and oncology. CD40 expression has been documented in a variety of B-cell malignancies including diffuse large B-cell lymphoma, follicular lymphoma, and chronic lymphocytic leukemia. Aberrant CD40 signaling may contribute to tumor cell survival, immune evasion, and microenvironmental interactions. In solid tumors, CD40 expression has been reported in carcinomas of the bladder, breast, ovary, and pancreas, where it may influence tumor-immune crosstalk and therapeutic response.

The CD40 protein contains multiple cysteine-rich domains in its extracellular region that mediate ligand binding, and a cytoplasmic tail that lacks intrinsic kinase activity but interacts with adaptor proteins to initiate downstream signaling. CD40 is expressed during early B-cell development and remains present on mature B cells, with particularly high expression in germinal center B cells. Beyond lymphoid tissues, CD40 is also detected in endothelial cells and fibroblasts

under inflammatory conditions, supporting its role in chronic inflammatory diseases such as rheumatoid arthritis and atherosclerosis.

Genetically, CD40 is located on chromosome 20q13.12. Mutations affecting CD40 signaling pathways can disrupt immunoglobulin class switching and contribute to immunodeficiency phenotypes. Therapeutically, the CD40-CD40L axis is being actively explored as a target for agonistic antibodies in cancer immunotherapy and antagonistic approaches in autoimmune disorders and transplantation.

This recombinant rabbit monoclonal antibody, clone C40/4826R, recognizes CD40 in research applications and is suitable for detecting CD40 expression in relevant experimental systems. Its specificity for CD40 supports studies of B-cell biology, immune activation, tumor immunology, and inflammatory signaling pathways.

Application Notes

Optimal dilution of the CD40 antibody should be determined by the researcher.

Immunogen

A portion of amino acids 29-107 was used as the immunogen for the CD40 antibody.

Storage

Aliquot the CD40 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

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