Anti-CD40 Antibody [A1E5]

EM1901-41



Product Type: Mouse monoclonal IgG1, primary antibodies

Species reactivity: Human

Applications: WB, IHC-P

Molecular Wt: Predicted band size: 31 kDa

Clone number: A1E5

Description: This gene is a member of the TNF-receptor superfamily. The encoded protein is a receptor

on antigen-presenting cells of the immune system and is essential for mediating a broad variety of immune and inflammatory responses including T cell-dependent immunoglobulin class switching, memory B cell development, and germinal center formation. AT-hook transcription factor AKNA is reported to coordinately regulate the expression of this receptor and its ligand, which may be important for homotypic cell interactions. Adaptor protein TNFR2 interacts with this receptor and serves as a mediator of the signal transduction. The interaction of this receptor and its ligand is found to be necessary for amyloid-beta-induced microglial activation, and thus is thought to be an early event in Alzheimer disease pathogenesis. Mutations affecting this gene are the cause of autosomal recessive hyper-IgM immunodeficiency type 3 (HIGM3). Multiple alternatively spliced transcript variants of this

gene encoding distinct isoforms have been reported.

Immunogen: Recombinant protein within human CD40 aa 1-250.

Positive control: Daudi cell lysates, human spleen tissue, human tonsil tissue, human lymph nodes tissue.

Subcellular location: Cell membrane, secreted.

Database links: SwissProt: P25942 Human

Recommended Dilutions:

WB 1:500-1:2,000 **IHC-P** 1:200-1:1,000

Storage Buffer: 1*PBS (pH7.4), 0.2% BSA, 50% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Store at +4 $^{\circ}$ C after thawing. Aliquot store at -20 $^{\circ}$ C. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.



Images

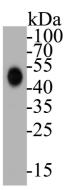


Fig1: Western blot analysis of CD40 on Daudi cell lysates. Proteins were transferred to a PVDF membrane and blocked with 5% BSA in PBS for 1 hour at room temperature. The primary antibody (EM1901-41, 1/500) was used in 5% BSA at room temperature for 2 hours. Goat Anti-Mouse IgG - HRP Secondary Antibody (HA1006) at 1:5,000 dilution was used for 1 hour at room temperature.

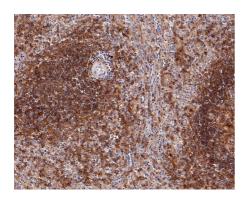


Fig2: Immunohistochemical analysis of paraffin-embedded human spleen tissue with Mouse anti-CD40 antibody (EM1901-41) at 1/200 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH₂O and PBS, and then probed with the primary antibody (EM1901-41) at 1/200 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

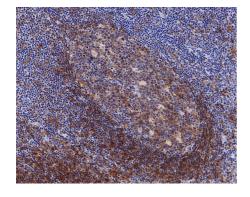


Fig3: Immunohistochemical analysis of paraffin-embedded human tonsil tissue with Mouse anti-CD40 antibody (EM1901-41) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH₂O and PBS, and then probed with the primary antibody (EM1901-41) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.



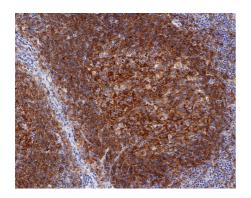


Fig4: Immunohistochemical analysis of paraffin-embedded human lymph nodes tissue with Mouse anti-CD40 antibody (EM1901-41) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH₂O and PBS, and then probed with the primary antibody (EM1901-41) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

- 1. Remer M. et. al. The Use of Anti-CD40 mAb in Cancer. Curr Top Microbiol Immunol. 2017;405:165-207.
- 2. Zhang B. et. al. The CD40/CD40L system: a new therapeutic target for disease. Immunol Lett. 2013 Jun;153(1-2):58-61.