

# CD40 polyclonal antibody

CD40 is a 45-50 kDa type I membrane protein and a member of the tumor necrosis factor (TNF) receptor superfamily. CD40 is also known as pb50 or CDW40. CD40 is expressed primarily by professional antigen-presenting cells and it is also expressed on non-immune cell types. The CD40 expressed by professional antigen-presenting cells plays a critical role in co-stimulation and antigen-presenting cell activation in T cell-dependent immune responses. Signals generated through CD40 in B cells are anti-apoptotic. These signals are also required for T cell-dependent B cell activation and proliferation, isotype switching, up-regulation of costimulatory receptors, germinal center formation and memory generation. CD40 signal transduction is initiated by binding trimeric CD40 ligand (CD40L) which is found on the surface of activated T cells. CD40 engages several signalling pathways in B cells and these include NF- $\kappa$ B, the mitogen-activated protein kinases p38 and c-Jun N-terminal kinase. The 62 amino acid cytoplasmic domain (CD40c) of CD40 contains two linear TNF-receptor associated factor (TRAF) binding domains. The membrane proximal site of CD40c binds TRAF6 and the membrane distal site binds TRAF1, 2 and 3. CD40c is thought to mediate the CD40-dependant signalling pathways by recruitment of TRAF to this multimerized domain. CD40 ligation has also been shown to stimulate iNOS expression, and therefore NO production, by activating NF- $\kappa$ B in IFN- $\gamma$  treated microglial cells. NO derived from microglia has been implicated in the damage of myelin-producing oligodendrocytes in demyelinating disorders like multiple sclerosis (MS) and neuronal death during Alzheimer's disease and brain trauma. Increased CD40-CD40 ligation has been implicated in the pathogenesis of several autoimmune inflammatory diseases, such as MS, arthritis and insulin-dependant diabetes.

This antibody is covered by our [Worry-Free Guarantee](#).

Citations: 3

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Ordering Information

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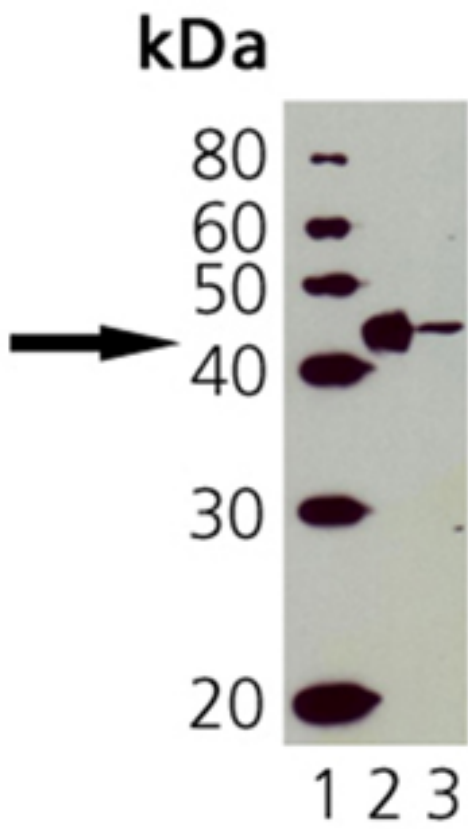
ADI-CSS-180-D

50 $\mu$ g

ADI-CSS-180-F	200µg
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**Manuals, SDS & CofA**

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Western Blot Analysis of CD40: Lane 1: MWM, Lane 2: ESK4 cell lysate, Lane 3: Molt 4 cell lysate.

## Handling & Storage

Long Term Storage -20°C

Shipping Blue Ice

**Regulatory Status** RUO - Research Use Only

## Product Details

Alternative Name	TNFRSF 5
Application	WB
Application Notes	Detects a band of ~45kDa by Western blot.
Formulation	Liquid. In PBS containing 50% glycerol and 0.09% sodium azide.
Host	Rabbit
Immunogen	Synthetic peptide corresponding to 20 residues of human CD40.
Purity Detail	Peptide affinity purified.
Recommendation Dilutions/Conditions	Western Blot (ECL, 1:200 – 1:1000)Suggested dilutions/conditions may not be available for all applications.Optimal conditions must be determined individually for each application.
Source	Purified from rabbit serum.
Species Reactivity	Bovine, Dog, Guinea pig, Hamster, Human, Monkey, Mouse, Porcine, Rabbit, Rat, Sheep
UniProt ID	P25942

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Last modified: May 29, 2024