Technical Data Sheet

Purified Mouse Anti-CD40

**Product Information**

- **Material Number:** 611362
- **Size:** 50 µg
- **Concentration:** 250 µg/ml
- **Clone:** 41/CD40
- **Immunogen:** Human CD40 aa. 71-187
- **Isotype:** Mouse IgG1
- **Reactivity:** QC Testing: Human
- **Target MW:** 44 kDa
- **Storage Buffer:** Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

**Description**

CD40, a member of the TNF receptor family, contains a cysteine-rich N-terminal domain and a Ser/Thr-rich region preceding the transmembrane domain. On B cells, signaling through CD40 induces cell growth and differentiation, mediates cell survival within the germinal center, and upregulates the expression of costimulatory and adhesion molecules, such as B7.1, B7.2, and ICAM-1. The interaction of CD40 on B cells and CD40L on activated CD4+ T cells is essential for immune functions, such as immunglobulin class switching. Signal transduction through CD40 pathways involves interaction with proteins such as TRAFs (TRAF2, TRAF3, TRAF5, and TRAF6); Jak 3; and Tyr phosphorylation of proteins, such as Lyn, Syk, PI-3-kinase, STAT3, and STAT5. In TRAF2-deficient mice, CD40-mediated B cell proliferation and NFκB activation are defective. Ku70 and Ku80 associate with the membrane-proximal region of CD40 in human primary B cells and the engagement of CD40 leads translocation of Ku proteins to the nucleus. Thus, CD40 interacts with a variety of signal transducers which mediate its role in B cell survival, growth, differentiation, and immunglobulin class switching.

**Preparation and Storage**

Store undiluted at -20°C.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

**Application Notes**

**Application**

- **Western blot:** Routinely Tested
- **Immunofluorescence:** Tested During Development

**Recommended Assay Procedure:**

Western blot: Please refer to [http://www.bdbiosciences.com/resources/cellbiology/index.jsp](http://www.bdbiosciences.com/resources/cellbiology/index.jsp)
## Suggested Companion Products

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
<th>Clone</th>
</tr>
</thead>
<tbody>
<tr>
<td>611546</td>
<td>EB1 Cell Lysate</td>
<td>500 µg</td>
<td>(none)</td>
</tr>
<tr>
<td>554002</td>
<td>HRP Goat Anti-Mouse Ig</td>
<td>1 mL</td>
<td>(none)</td>
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<tr>
<td>554001</td>
<td>FITC Goat Anti-Mouse Ig</td>
<td>0.5 mg</td>
<td>Polyclonal</td>
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## Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

## References


Stamenkovic I, Clark EA, Seed B. A B-lymphocyte activation molecule related to the nerve growth factor receptor and induced by cytokines in carcinomas. *EMBO J.* 1989; 8(5):1403-1410. (Biology)