Mouse CD28 Antibody
Monoclonal Rat IgG, Clone # 794716
Catalog Number: MAB4832

DESCRIPTION

Species Reactivity: Mouse
Specificity: Detects mouse CD28 in ELISA.
Source: Monoclonal Rat IgG, Clone # 794716
Immunogen: Mouse myeloma cell line NS0-derived recombinant mouse CD28 Accession # P31041
Endotoxin Level: <0.10 EU per 1 μg of the antibody by the LAL method.
Formulation: Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

<table>
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<tr>
<th>Recommended Concentration</th>
<th>Sample</th>
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<tr>
<td>0.07-0.42 μg/mL</td>
<td>See Below</td>
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<tr>
<td>0.25 μg/10^6 cells</td>
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PREPARATION AND STORAGE

Reconstitution: Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping: The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage: Use a manual defrost freezer and avoid repeated freeze-thaw cycles.
- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

CD28 and CTLA-4, together with their ligands B7-1 and B7-2, constitute one of the dominant costimulatory pathways that regulate T and B cell responses. CD28 and CTLA-4 are structurally homologous molecules that are members of the immunoglobulin (Ig) gene superfamily. Both CD28 and CTLA-4 are composed of a single Ig V-like extracellular domain, a transmembrane domain and an intracellular domain. CD28 and CTLA-4 are both expressed on the cell surface as disulfide-linked homodimers or as monomers. The genes encoding these two molecules are closely linked on human chromosome 2 and mouse chromosome 1. Mouse CD28 is expressed constitutively on virtually 100% of mouse T cells and on developing thymocytes. Cell surface expression of mouse CD28 is down-regulated upon ligation of CD28 in the presence of PMA or PHA. In contrast, CTLA-4 is not expressed constitutively but is upregulated rapidly following T cell activation and CD28 ligation. Cell surface expression of CTLA-4 peaks approximately 48 hours after activation. Although both CTLA-4 and CD28 can bind to the same ligands, CTLA-4 binds to B7-1 and B7-2 with a 20-100 fold higher affinity than CD28. CD28/B7 interaction has been shown to prevent apoptosis of activated T cells via the up-regulation of Bcl-xL. CD28 ligation has also been shown to regulate Th1/Th2 differentiation. Agonist activity has been reported using MAB4831 (4,5).

References:

Adapted by Bio-technne from R&D Systems. Original biological research data and materials generated in our laboratories have been used to develop the information and specifications of this product, which is reviewed by a panel of independent experts.

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