

## DESCRIPTION

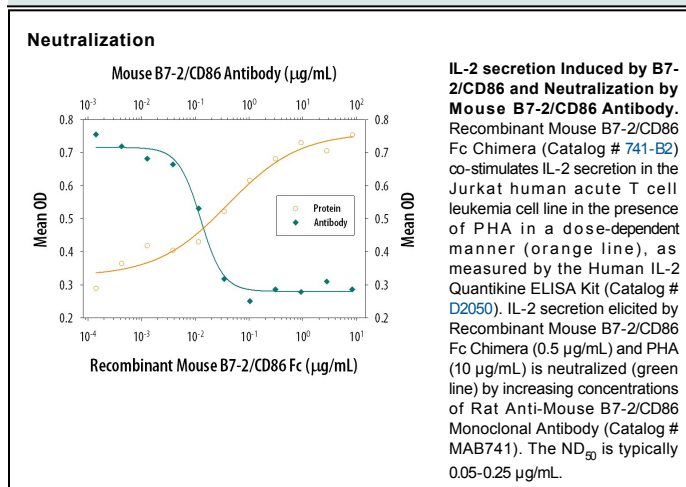
<b>Species Reactivity</b>	Mouse
<b>Specificity</b>	Detects mouse B7-2/CD86 in direct ELISAs and Western blots. In direct ELISAs, no cross-reactivity with recombinant mouse B7-1, recombinant human (rh) B7-1 or rhB7-2 is observed.
<b>Source</b>	Monoclonal Rat IgG <sub>2A</sub> Clone # GL1
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	LPS-activated mouse B cells
<b>Endotoxin Level</b>	<0.10 EU per 1 µg of the antibody by the LAL method.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

## 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.

	Recommended Concentration	Sample
<b>Western Blot</b>	1 µg/mL	Recombinant Mouse B7-2/CD86 Fc Chimera (Catalog # 741-B2)
<b>Flow Cytometry</b>	2.5 µg/10 <sup>6</sup> cells	Mouse splenocytes
<b>Neutralization</b>	Measured by its ability to neutralize B7-2/CD86-induced IL-2 secretion in the Jurkat human acute T cell leukemia cell line. Linsley, P. <i>et al.</i> (1990) Proc. Natl. Acad. Sci. <b>87</b> :5031. The Neutralization Dose (ND <sub>50</sub> ) is typically 0.05-0.25 µg/mL in the presence of 0.5 µg/mL Recombinant Mouse B7-2/CD86 Fc Chimera and 10 µg/mL PHA.	

## DATA



## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.5 mg/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<b>Stability &amp; Storage</b>	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## BACKGROUND

B7-1 and B7-2, together with their receptors CD28 and CTLA-4, constitute one of the dominant costimulatory pathways that regulate T- and B-cell responses. 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 and is involved in the down-regulation of the immune response. B7-1 is expressed on activated B cells, activated T cells, and macrophages. B7-2 is constitutively expressed on interdigitating dendritic cells, Langerhans cells, peripheral blood dendritic cells, memory B cells, and germinal center B cells. Additionally, B7-2 is expressed at low levels on monocytes and can be up-regulated through interferon  $\gamma$ . B7-1 and B7-2 are both members of the immunoglobulin superfamily. Mouse B7-2 is a 309 amino acid (aa) protein containing a putative 23 aa signal peptide, a 221 aa extracellular domain, a 21 aa transmembrane domain, and a 44 aa cytoplasmic domain. Mouse B7-2 and B7-1 share 28% amino acid identity. Mouse and human B7-2 share 50% amino acid identity. However, it has been observed that both human and mouse B7-1 and B7-2 can bind to either human or mouse CD28 and CTLA-4, suggesting that there are conserved amino acids which form the B7-1/B7-2/CD28/CTLA-4 critical binding sites.

## References:

1. Azuma, M. *et al.* (1993) *Nature* **366**:76.
2. Freeman, G.J. *et al.* (1993) *Science* **262**:909.
3. Freeman, G. *et al.* (1991) *J. Exp. Med.* **174**:625.
4. Selvakumar, A. *et al.* (1993) *Immunogenetics* **38**:292.
5. Chen, C. *et al.* (1994) *J. Immunol.* **152**:4929.
6. Freeman, G.J. *et al.* (1993) *J. Exp. Med.* **178**:2185.