

## DESCRIPTION

<b>Species Reactivity</b>	Mouse
<b>Specificity</b>	Detects mouse OX40 Ligand/TNFSF4 in ELISAs and Western blots. In sandwich immunoassays, no cross-reactivity or interference with recombinant mouse (rm) OX40, recombinant human (rh) OX40 Ligand, rmFas Ligand, rmLIGHT, or rhLIGHT is observed. In Western blots, 100% cross-reactivity with rmTNF- $\alpha$ is observed, 15-30% with rmTRANCE and rmTRAIL is observed, and no cross-reactivity with rmBAFF, rmEDA, rmGITR Ligand, rmLIGHT, rmTWEAK, rmFas Ligand, rhAPRIL, or rhOX40 Ligand is observed.
<b>Source</b>	Monoclonal Rat IgG <sub>2A</sub> Clone # 182609
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant mouse OX40 Ligand/TNFSF4 Gln49-Leu198 Accession # P43488
<b>Formulation</b>	Lyophilized from a 0.2 $\mu$ m filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 $\mu$ m 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 $\mu$ g/mL	Recombinant Mouse OX40 Ligand/TNFSF4 (Catalog # 1236-OX)
<b>Mouse OX40 Ligand/TNFSF4 Sandwich Immunoassay</b>		<b>Reagent</b>
<b>ELISA Capture</b>	2-8 $\mu$ g/mL	Mouse OX40 Ligand/TNFSF4 Antibody (Catalog # MAB12362)
<b>ELISA Detection</b>	0.5-2.0 $\mu$ g/mL	Mouse OX40 Ligand/TNFSF4 Biotinylated Antibody (Catalog # BAM12361)
<b>Standard</b>		Recombinant Mouse OX40 Ligand/TNFSF4 (Catalog # 1236-OX)

## 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>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <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

OX40 Ligand (OX40L), also known as gp34, is a type II transmembrane glycoprotein belonging to the TNF superfamily. Murine OX40L cDNA encodes a 198 amino acid (aa) protein comprised of a 28 aa N-terminal cytoplasmic domain, a 20 aa transmembrane segment, and a 150 aa C-terminal extracellular domain (1). Human and mouse OX40L share 46% sequence identity at the amino acid level (1). OX40L is expressed on activated antigen presenting cells such as B cells, macrophages, dendritic cells, and on endothelial cells at the site of inflammation. The receptor for OX40L is OX40 (CD134) which is expressed predominantly on activated CD4<sup>+</sup> T cells. Expression of OX40 is transient following engagement of T cell receptors (2). Ligation of OX40L by OX40 stimulates proliferation and differentiation of activated B cells, and increases immunoglobulin secretion (3, 4). The expression of OX40L on B cells is up-regulated by CD40 ligation (3). Engagement of the OX40-OX40L system has co-stimulatory effects on T cells by stimulating the production of cytokines by T helper cells and increasing the survival of memory T cells (2, 5). Blocking of the OX40-OX40L interaction *in vitro* inhibits co-stimulation resulting in decreased T cell proliferation and adhesion of T cells to endothelial cells. Inhibition of the OX40-OX40L interaction in disease models has beneficial effects in acute graft-versus-host disease, inflammatory bowel disease and decreases the development of collagen-induced arthritis and experimental leishmaniasis (6).

## References:

1. Baum, P.R. *et al.* (1994) EMBO J. **13**:3992.
2. Gramaglia, I. *et al.* (1999) J. Immunol. **161**:6510.
3. Stuber, E. *et al.* (1995) Immunity **2**:507.
4. Malstrom, V. *et al.* (2001) J. Immunol. **166**:6972.
5. Maxwell, J.R. *et al.* (2000) J. Immunol. **164**:107.
6. Weinberg, A.D. (2002) Trends Immunol. **23**:102.