Mouse OX40 Ligand/TNFSF4 Antibody

Monoclonal Rat IgG_{2A} Clone # 182601

Catalog Number: MAB1236

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse OX40 Ligand/TNFSF4 in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant human (rh) APRIL, rhGITR Ligand, rhLIGHT, rhLTα1/β2, rhLTα2/β1, recombinant cotton rat TNF-α, recombinant mouse (rm) TNF-α, rmTRAIL, rhTRANCE, rmTRANCE, rmTWEAK, or rhVEGI is observed.
Source	Monoclonal Rat IgG_{2A} Clone # 182601
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse OX40 Ligand/TNFSF4 Gln49-Leu198 Accession # P43488
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. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

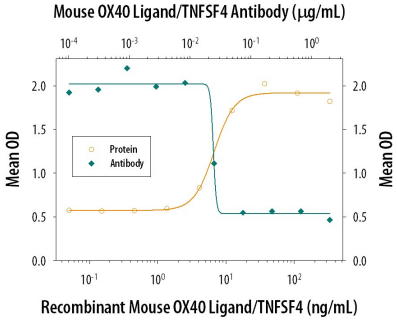
APPLICATIONS

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
Western Blot	1 µg/mL	Recombinant Mouse OX40 Ligand/TNFSF4 (Catalog # 1236-OX) under non-reducing conditions only
Neutralization	Measured by its ability to neutralize OX40 Ligand/TNFSF4-induced IL−2 secretion in mouse T cells. The Neutralization Dose (ND_{50}) is typically 0.01-0.05 µg/mL in the presence of 30 ng/mL Recombinant Mouse OX40 Ligand/TNFSF4, 10 µg/mL of a cross-linking antibody, Mouse polyHistidine Monoclonal Antibody, and sub-optimal amounts of Mouse CD3ε Monoclonal Antibody.	

DATA

Neutralization



IL-2 Secretion Induced by OX40 Ligand/TNFSF4 and Neutralization by Mouse OX40 Ligand/TNFSF4 Antibody. In the presence of a cross-linking antibody, Mouse polyHistidine Monoclonal Antibody (10 µg/mL, Catalog # MAB050) and sub-optimal amounts of Mouse CD3ε Monoclonal Antibody (Catalog # MAB484), Recombinant Mouse OX40 Ligand/TNFSF4 (Catalog # 1236-OX) stimulates IL-2 secretion in mouse T cells in a dose-dependent manner (orange line), as measured by the Mouse IL-2 Quantikine ELISA Kit (Catalog # M2000). Under these conditions, IL-2 secretion elicited by Recombinant Mouse OX40 Ligand/TNFSF4 (30 ng/mL) is neutralized (green line) by increasing concentrations of Rat Anti-Mouse OX40 Ligand/TNFSF4 Monoclonal Antibody (Catalog # MAB1236). The ND_{50} is typically 0.01-0.05 µg/mL.

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. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
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.

bio-techne
bio-techne.com
Global info@bio-techne.com techsupport@bio-techne.com
North America TEL 800 343 7475 Europe | Middle East | Africa TEL +44 (0)1235 529449
China info.cn@bio-techne.com TEL +86 (21) 52380373
Rest of World bio-techne.com/find-us/distributors TEL +1 612 379 2956

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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 $CD4^+$ 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 upregulated 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:

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6. Weinberg, A.D. (2002) Trends Immunol. **23**:102.

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bio-techne.com
Global info@bio-techne.com techsupport@bio-techne.com
North America TEL 800 343 7475 Europe | Middle East | Africa TEL +44 (0)1235 529449
China info.cn@bio-techne.com TEL +86 (21) 52380373
Rest of World bio-techne.com/find-us/distributors TEL +1 612 379 2956