Recombinant Mouse OX40 Ligand/TNFSF4

Catalog Number: 1236-OX/CF

DESCRIPTION

Source	Mouse myeloma cell line, NS0-derived Gln49-Leu198, with an N-terminal 10-His tag Accession # P43488
N-terminal Sequence Analysis	His
Predicted Molecular Mass	18 kDa

SPECIFICATIONS

SDS-PAGE	21-25 kDa, reducing conditions
Activity	Measured by its ability to co-stimulate IL-2 secretion by mouse T cells in the presence of anti-CD3. The ED_{50} for this effect is 10-30 ng/mL in the presence of a cross-linking antibody, Mouse Anti-polyHistidine Monoclonal Antibody (Catalog # MAB050).
Endotoxin Level	<1.0 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE under reducing conditions and visualized by silver stain.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 100 µg/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. ● 3 months, -20 to -70 °C under sterile conditions after reconstitution.

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) residue 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 murine OX40L share 46% sequence identity at the amino acid level (1). The 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) that 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 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:

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