

**DESCRIPTION**

**Source** Mouse myeloma cell line, NS0-derived  
Gln49-Leu199, with an N-terminal 6-His tag  
Accession # Q9Z2P3

**N-terminal Sequence Analysis** His

**Predicted Molecular Mass** 18 kDa

**SPECIFICATIONS**

**SDS-PAGE** 17-31 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<sub>50</sub> for this effect is 0.05-0.25 µg/mL in the presence of a cross-linking antibody, Mouse Anti-polyHistidine Monoclonal Antibody (Catalog # MAB050).

**Endotoxin Level** <0.10 EU per 1 µg of the protein by the LAL method.

**Purity** >95%, by SDS-PAGE with silver staining.

**Formulation** Lyophilized from a 0.2 µm filtered solution in PBS and NaCl. See Certificate of Analysis for details.

**PREPARATION AND STORAGE**

**Reconstitution** Reconstitute at 250 µg/mL in 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 TNFSF4, CD252, and gp34) is a type II transmembrane glycoprotein belonging to the TNF superfamily (1-3). OX40 Ligand coordinates with other costimulators (B7, CD40 Ligand/TNFSF5, CD30 Ligand/TNFSF8, CD27 Ligand/TNFSF7, and 4-1BB Ligand/TNFSF9) to manage the activation of the immune response. The rat OX40 Ligand cDNA encodes a 199 amino acid (aa) polypeptide with a short amino-terminal cytoplasmic domain and a 151 aa carboxy-terminal extracellular domain (ECD). The rat OX40 Ligand ECD shares 79% and 40% aa sequence identity with mouse and human OX40 Ligand ECD, respectively. OX40 Ligand is expressed on the surface of activated antigen presenting cells, B cells, T cells, and endothelial cells at sites of inflammation (4-6). Similar to other TNF superfamily members, membrane-bound OX40 Ligand is expressed as a homotrimer (7). OX40 Ligand binds to the type 1 transmembrane receptor, OX40, which is expressed on activated T cells. OX40 Ligand-OX40 signaling results in increased T cell survival, proliferation, and cytokine production (8, 9). It also modulates natural killer cell function, inhibits the conversion of effector T cells into immunosuppressive regulatory T cells (Tregs), and promotes the maintenance of and recall response in memory T cells (7-13). OX40 Ligand-OX40 signaling is involved in allergic airway inflammation, graft-versus-host disease, and other autoimmune diseases (14-16). Mutations in OX40 and OX40 Ligand are associated with cardiovascular disease (13, 17).

**References:**

1. Godfrey, W.R. *et al.* (1994) *J. Exp. Med.* **180**:757.
2. al-Shamkhani, A. *et al.* (1996) *Eur. J. Immunol.* **26**:1695.
3. Baum, P.R. *et al.* (1994) *Circ. Shock* **44**:30.
4. Gough, M.J. and A.D. Weinberg (2009) *Adv. Exp. Med. Biol.* **647**:94.
5. Moran, A.E. *et al.* (2013) *Curr. Opin. Immunol.* **25**:230.
6. Ohshima, Y. *et al.* (1997) *J. Immunol.* **159**:3838.
7. Croft, M. (2010) *Annu. Rev. Immunol.* **28**:57.
8. So, T. and M. Croft (2007) *J. Immunol.* **179**:1427.
9. Xiao, X. *et al.* (2008) *J. Immunol.* **181**:3193.
10. Mousavi, S.F. *et al.* (2008) *J. Immunol.* **181**:5990.
11. Salek-Ardakani, S. *et al.* (2003) *J. Exp. Med.* **198**:315.
12. Bansal-Pakala, P. *et al.* (2001) *Nat. Med.* **7**:907.
13. Ishii, N. *et al.* (2010) *Adv. Immunol.* **105**:63.
14. Damayanti, T. *et al.* (2010) *Am. J. Respir. Crit. Care Med.* **181**:688.
15. Xiao, X. *et al.* (2012) *Nat. Immunol.* **13**:981.
16. Gramaglia, I. *et al.* (1998) *J. Immunol.* **161**:6510.
17. Nakano, M. *et al.* (2010) *Cardiovasc. Res.* **88**:539.