

## OX40 Ligand/TNFSF4 Protein, Human (HEK293, His-Flag)

<b>Cat. No.:</b>	HY-P78504
<b>Synonyms:</b>	OX40L; OX-40L; OX40L; CD252; TNFSF4; OX40 Ligand; CD134 ligand; CD134L; TXGP1; Glycoprotein Gp34
<b>Species:</b>	Human
<b>Source:</b>	HEK293
<b>Accession:</b>	P23510 (Q51-L183)
<b>Gene ID:</b>	7292
<b>Molecular Weight:</b>	65-140 kDa

### PROPERTIES

<b>Biological Activity</b>	Immobilized Human OX40 Ligand Trimer, His Tag at 1µg/ml (100µl/well) on the plate. Dose response curve for Human OX40, hFc Tag with the EC <sub>50</sub> of 0.16µg/ml determined by ELISA.
<b>Appearance</b>	Lyophilized powder.
<b>Formulation</b>	Lyophilized from a 0.22 µm filtered solution of PBS, pH 7.4. Normally 5% trehalose is added as protectant before lyophilization.
<b>Endotoxin Level</b>	<1 EU/µg, determined by LAL method.
<b>Reconstitution</b>	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O.
<b>Storage &amp; Stability</b>	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
<b>Shipping</b>	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

#### Background

OX40 Ligand (TNFSF4) is a type II glycoprotein with a cytoplasmic tail of 23 aa and an extracellular domain of 133 aa<sup>[1]</sup>. OX40 Ligand is expressed on antigen-presenting cells, such as B cells, dendritic cells (DCs), and macrophages, and airway smooth muscle cells<sup>[3]</sup>. OX40 Ligand is a ligand for TNFRSF4 (CD134), belongs to tumor necrosis factor (TNF) family. OX40 Ligand can activate OX40 and thereby functioning as a T cell co-stimulatory molecule. The OX40-OX40 Ligand interaction promotes effector T-cell survival and effectively induces memory T-cell generation, as well as enhances the helper function of Tfh for B cells, and also promotes the differentiation and maturation of DCs<sup>[1][2]</sup>. Human OX40 Ligand shares <70% aa sequence identity with mouse, rat and rabbit. The interaction between OX40 Ligand with OX40 is essential for the generation of antigen-specific memory T cells, and induces host antitumor immunity<sup>[4]</sup>. But the over-upregulation of OX40 and OX40L may induce abnormal activation of Tfh cells and excessive production of autoantibodies, which leads to autoimmune disease<sup>[1]</sup>.

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## REFERENCES

- [1]. Kaur D, et al. OX40/OX40 ligand interactions in T-cell regulation and asthma. *Chest*. 2012 Feb;141(2):494-499.
- [2]. Fu N, et al. The OX40/OX40L Axis Regulates T Follicular Helper Cell Differentiation: Implications for Autoimmune Diseases. *Front Immunol*. 2021 Jun 21;12:670637.
- [3]. Croft M, et al. The significance of OX40 and OX40L to T-cell biology and immune disease. *Immunol Rev*. 2009 May;229(1):173-91.
- [4]. Buglio D, et al. HDAC11 plays an essential role in regulating OX40 ligand expression in Hodgkin lymphoma. *Blood*. 2011 Mar 10;117(10):2910-7
- [5]. Ito T, et al, Duramad O, Hanabuchi S, Perng OA, Gilliet M, Qin FX, Liu YJ. OX40 ligand shuts down IL-10-producing regulatory T cells. *Proc Natl Acad Sci U S A*. 2006 Aug 29;103(35):13138-43.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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