

OX40/TNFRSF4 Protein, Rhesus Macaque (HEK293, His)

Cat. No.:	HY-P75954
Synonyms:	Tumor necrosis factor receptor superfamily member 4; TNFRSF4; OX40; CD134; Txgp1
Species:	Rhesus Macaque
Source:	HEK293
Accession:	XP_001090870 (K28-A216)
Gene ID:	699674
Molecular Weight:	Approximately 30-45 kDa due to the glycosylation

PROPERTIES

AA Sequence	<pre> K L H C V G D T Y P S N D R C C Q E C R P G N G M V S R C N R S Q N T V C R P C G P G F Y N D V V S A K P C K A C T W C N L R S G S E R K Q P C T A T Q D T V C R C R A G T Q P L D S Y K P G V D C A P C P P G H F S P G D N Q A C K P W T N C T L A G K H T L Q P A S N S S D A I C E D R D P P P T Q P Q E T Q G P P A R P T T V Q P T E A W P R T S Q R P S T R P V E V P R G P A V A </pre>
Biological Activity	Measured by its binding ability in a functional ELISA. When Recombinant Rhesus Macaque OX40 is immobilized at 2 µg/mL (100 µL/well), the concentration of Human OX40 Ligand that produces 50% of the optimal binding response is found to be approximately 1.369 ng/mL.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	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.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	OX40 (TNFRSF4), a member of TNFR superfamily, is a receptor for OX40 Ligand. OX40 is preferentially expressed by T cells, but also found in natural killer T cells, natural killer cells, neutrophils, and human airway smooth muscle cells. Human OX40 shares <30% aa sequence identity with mouse and rat. Mouse OX40 shares 90% aa sequence identity with rat ^[1] .
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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^{[1][2]}. The interaction between OX40 Ligand with OX40 is essential for the generation of antigen-specific memory T cells, and induces host antitumor immunity^[3]. 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^[1].

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]. 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.
- [4]. Kotani A, et al. Signaling of gp34 (OX40 ligand) induces vascular endothelial cells to produce a CC chemokine RANTES/CCL5. *Immunol Lett*. 2002 Oct 21;84(1):1-7.
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Caution: Product has not been fully validated for medical applications. For research use only.

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