

Product Data Sheet

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

Cat. No.:	HY-P75953
Synonyms:	Tumor necrosis factor receptor superfamily member 4; TNFRSF4; OX40; CD134; Txgp1
Species:	Rhesus Macaque
Source:	HEK293
Accession:	XP_001090870 (M1-A216)
Gene ID:	699674
Molecular Weight:	Approximately 47 kDa

PROPERTIES	
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 $\mu\text{g}/\text{mL}$ in ddH_2O.
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] . 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.

Caution: Product has not been fully validated for medical applications. For research use only.

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