

Biotinylated Recombinant Human OX40/TNFRSF4 His-tag Avi-tag

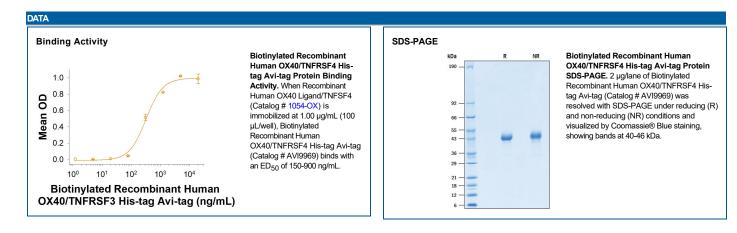
Catalog Number: AVI9969

DESCRIPTION				
Source	Chinese Hamster Ovary cell line, CHO-derived human OX40/TNFRSF4 protein			
	Human OX40/TNFRSF4 (Leu29-Ala216) Accession # P43489.1	7-His tag	Avi-tag	
	N-terminus		C-terminus	
N-terminal Sequence Analysis	Leu29			
Structure / Form	Biotinylated via Avi-tag			
Predicted Molecular Mass	23 kDa			

SPECIFICATIONS		
SDS-PAGE	40-46 kDa, under reducing conditions	
Activity	The biotin to protein ratio is greater than 0.7 as determined by the HABA assay.	
	Measured by its binding ability in a functional ELISA. When Recombinant Human OX40 Ligand/TNFSF4 (Catalog # 1054-OX) is immobilized at 1.00 μg/mL (100 μL/well), Biotinylated Recombinant Human OX40/TNFRSF4 His-tag Avi-tag binds with an ED ₅₀ of 150-900 ng/mL.	
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.	
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.	
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.	

PREPARATION AND STORAGE		
Reconstitution	Reconstitute at 500 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.



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BACKGROUND

OX40 (CD134; TNFRSF4) is a T cell co-stimulatory molecule of the TNF receptor superfamily that coordinates with other co-stimulators (CD28, CD40, CD30, CD27 and 4-1BB) to manage the activation of the immune response (1-3). Human OX40 is a 48 kDa type I transmembrane glycoprotein with a 28 amino acid (aa) signal sequence, a 185 aa extracellular domain (ECD) that contains a cysteine-rich region, a 20 aa transmembrane segment, and a 41 aa cytoplasmic domain (4). The ECD of human OX40 shares 63% sequence identity with the ECD of mouse and rat OX40. OX40 is up-regulated on CD4⁺ and CD8⁺ T cells upon engagement of the TCR by antigen presenting cells along with co-stimulation by CD40-CD40 Ligand and CD28-B7 (5, 6). OX40 Ligand is primarily expressed on antigen presenting cells (5). OX40 Ligand engagement of OX40 on activated CD4⁺ T cells results in increased T cell survival, proliferation, and cytokine production. It also inhibits the conversion of effector T cells into immunosuppressive regulatory T cells (Tregs) and can promote the maintenance of and recall response in memory T cells (3, 7-10). OX40 is

constitutively expressed on Tregs and enhances the sensitivity of Tregs to IL-2, thus promoting Treg proliferation. OX40 has also been shown to decrease the cells' immunosuppressive activity on effector T cells (11-14). OX40-OX40 Ligand signaling is involved in allergic airway inflammation, graft-versus-host disease and autoimmune disease (6, 15, 16). Mutations in OX40 and OX40 Ligand are associated with cardiovascular disease (17, 18). Our Avi-tag Biotinylated human OX40/TNFRSF4 Hi-tag features biotinylation at a single site contained within the Avi-tag, a unique 15 amino acid peptide. Protein orientation will be uniform when bound to streptavidin-coated surface due to the precise control of biotinylation and the rest of the protein is unchanged so there is no interference in the protein's bioactivity.

References:

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