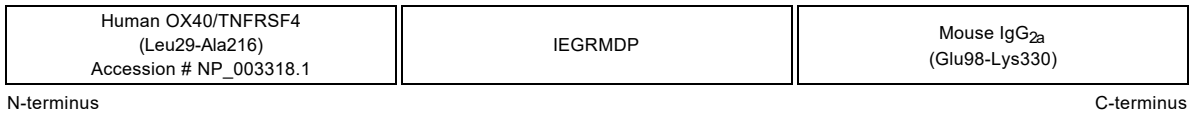
Recombinant Human OX40/TNFRSF4 Mouse IgG2a Fc Chimera

Catalog Number: 10649-OX

DESCRIPTION

Source

Mouse myeloma cell line, NS0-derived human OX40/TNFRSF4 protein



N-terminal Sequence Analysis	Leu29
Structure / Form	Disulfide-linked homodimer
Predicted Molecular Mass	47 kDa

SPECIFICATIONS

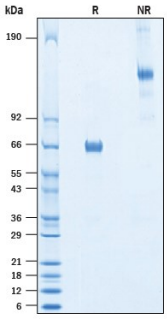
SDS-PAGE	60-70 kDa, under reducing conditions
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Human OX40 Ligand/TNFSF4 Protein (Catalog # 1054-OX) is immobilized at 250 ng/mL, the concentration of Recombinant Human OX40/TNFRSF4 Mouse IgG2a Fc Chimera that produces 50% optimal binding response is found to be approximately 2.5-15 ng/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>90%, 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. 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.

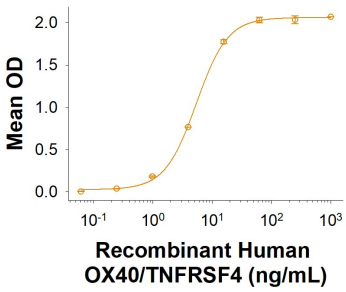
DATA

SDS-PAGE



2 µg/lane of Recombinant Human OX40/TNFRSF4 mFc Chimera Protein (Catalog # 10649-OX) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 60-70 kDa and 120-140 kDa, respectively.

Binding Activity



When Recombinant Human OX40 Ligand/TNFSF4 Protein (Catalog # 1054-OX) is immobilized at 250 ng/mL, the concentration of Recombinant Human OX40/TNFRSF4 Mouse IgG2a Fc Chimera (Catalog # 10649-OX) that produces 50% optimal binding response is found to be approximately 2.5-15 ng/mL.

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Recombinant Human OX40/TNFRSF4
Mouse IgG2a Fc Chimera

Catalog Number: 10649-OX

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).

References:

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