

DESCRIPTION

Source Mouse myeloma cell line, NS0-derived human OX40/TNFRSF4 protein
Leu29-Ala216, with a C-terminal 6-His tag
Accession # P43489

N-terminal Sequence Analysis Leu29

Structure / Form

Predicted Molecular Mass 21 kDa

SPECIFICATIONS

SDS-PAGE 40-44 kDa, reducing conditions

Activity Measured by its binding ability in a functional ELISA.
When Recombinant Human OX40/TNFRSF4 is coated at 0.25 µg/mL (100 µL/well), the concentration of Recombinant Human OX40 Ligand/TNFSF4 (Catalog # 1054-OX) that produces 50% optimal binding response is 0.25-1.5 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. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution Reconstitute at 500 µg/mL in PBS.

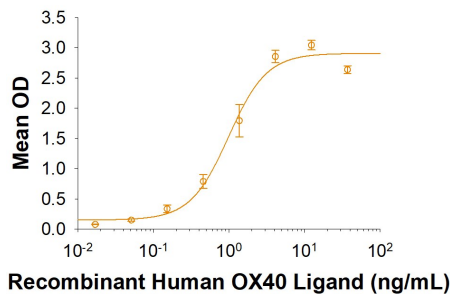
Shipping The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage

- 12 months from date of receipt, ≤ -20 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, ≤ -20 °C under sterile conditions after reconstitution.

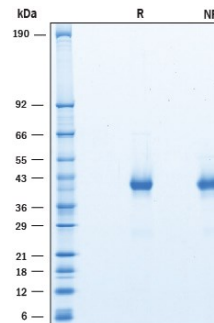
DATA

Binding Activity



When Recombinant Human OX40/TNFRSF4 is coated at 0.25 µg/mL, Recombinant Human OX40 Ligand/TNFSF4 (Catalog # 1054-OX) binds with an ED₅₀ of 0.25-1.5 ng/mL.

SDS-PAGE



2 µg/lane of Recombinant Human OX40/TNFRSF4 was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 40 - 44 kDa.

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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