Recombinant Cynomolgus Monkey CD2 Fc Chimera

Catalog Number: 10213-CD

DESCRIPTION

Source

Chinese Hamster Ovary cell line, CHO-derived cynomolgus monkey CD2 protein

Cynomolgus Monkey CD2 (Lys25-Asp209) Accession # Q6SZ61	IEGRMD	Human IgG_1 (Pro100-Lys330)

N-terminus C-terminus

N-terminal Sequence Analysis	Lys25
Structure / Form	Disulfide-linked homodimer
Predicted Molecular Mass	48 kDa

SPECIFICATIONS

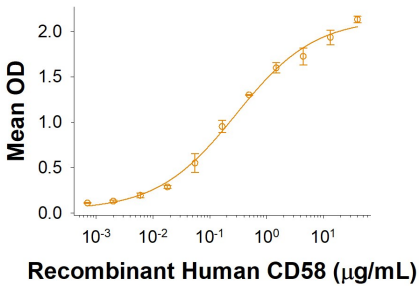
SDS-PAGE	60-66 kDa, under reducing conditions
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Cynomolgus Monkey CD2 Fc Chimera (Catalog # 10213-CD) is immobilized at 0.25 µg/mL (100 µL/well), the concentration of Recombinant Human CD58/LFA-3 Fc Chimera (Catalog # 10068-CD) that produces 50% of the optimal binding response is 0.15-0.9 µg/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 100 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.

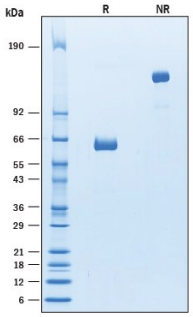
DATA

Binding Activity



When Recombinant Cynomolgus CD2 Fc Chimera (Catalog # 10213-CD) is immobilized at 0.25 µg/mL, 100 µL/well, Recombinant Human CD58/LFA-3 Fc Chimera (Catalog # 10068-CD) binds with an ED_{50} of 0.15-0.9 µg/mL.

SDS-PAGE



2 µg/lane of Recombinant Cynomolgus Monkey CD2 Fc Chimera (Catalog # 10213-CD) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 60-66 kDa and 120-135 kDa, respectively.

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Catalog Number: 10213-CD

BACKGROUND

T cell surface antigen CD2 is a type I glycoprotein belonging to the Ig superfamily and is expressed on T cells, NK cells, B cells and some antigen presenting cells. CD2 functions as an activator of T lymphocytes and thymocytes (1). Mature human CD2 consists of a 185 amino acid (aa) extracellular domain (ECD) with an Ig-like V-type and an Ig-like C2 type domain, a 26 aa transmembrane segment, and a 116 aa cytoplasmic tail. The extracellular domain is composed of two immunoglobulin-superfamily domains with highly-charged binding regions (2). Within the ECD, Cynomolgus CD2 shares 92% aa sequence identity with human CD2. It interacts with both CD58 and CD59 directly to activate T cells and their adhesion pathways (3). The conformational flexibility of the CD2 molecule affects function through the conformational status of the adhesive ligands (4). Together with PSTPIP1, CD2 works to regulate T cell activation (5). These two proteins colocalize with a second CD2-binding protein to signal immunological synapse formation in T cells (6). CD2 is an adhesion molecule present on the cell surface of T cells, natural killer (NK) cells, and B cells; and its interaction with CD58 on antigen-presenting cells plays an important role in their immune reaction (7). CD2-CD58 interactions play a critical role in the anti-tumor immune response, and restoration of this signaling is an important strategy for anti-tumor therapy (8). Furthermore, CD2-CD58 interactions are pivotal for the activation and function of adaptive natural killer cells in human cytomegalovirus infection (9).

References:

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