Recombinant Cynomolgus Monkey ALCAM/CD166 His-tag

Catalog Number: 10027-AL

DESCRIPTION

Source	Chinese Hamster Ovary cell line, CHO-derived cynomolgus monkey ALCAM/CD166 protein Trp28-Ala526, with a C-terminal 6-His tag Accession # XP_005548303
N-terminal Sequence Analysis	Trp28
Predicted Molecular Mass	57 kDa

SPECIFICATIONS

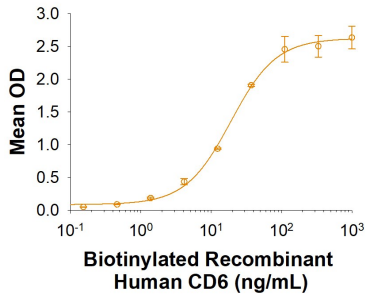
SDS-PAGE	67-89 kDa, reducing conditions
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Human Cynomolgus Monkey ALCAM/CD166 is immobilized at 1 µg/mL (100 µL/well), Biotinylated Recombinant Human CD6 Fc Chimera binds with an ED_{50} of 10-50 ng/mL.
Endotoxin Level	<0.10 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 1 mg/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.

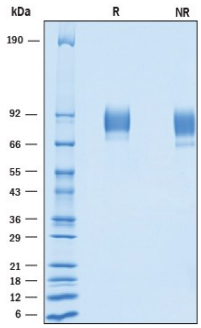
DATA

Binding Activity



When Recombinant Cynomolgus Monkey ALCAM (Catalog # 10027-AL) is coated onto a microplate at 1 µg/mL, Biotinylated Recombinant Human CD6 Fc Chimera binds with an ED_{50} of 10-50 ng/mL.

SDS-PAGE



2 µg/lane of Recombinant Cynomolgus Monkey ALCAM/CD166 was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 67-89 kDa.

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BACKGROUND

ALCAM (activated leukocyte cell adhesion molecule), designated CD166, is a 100-110 kDa type I transmembrane glycoprotein and a member of the Ig CAM family within the immunoglobulin superfamily (1). The cynomologous ALCAM amino acid (aa) sequence includes a signal peptide, an extracellular domain (ECD) with two V-type and three C2-type Ig-like domains, a transmembrane domain and a short cytoplasmic domain (1). Human ALCAM has several isoforms, including an isoform lacking most of the cytoplasmic domain and a secreted isoform (sALCAM) which antagonizes full-length ALCAM (2, 3). Mature cynomologous ALCAM ECD shares 93% and 96% aa sequence identity with human and mouse/rat ALCAM, respectively. ALCAM is expressed on multiple cell types including thymic epithelium, microvascular endothelium, activated lymphocytes and monocytes, and monocyte-derived dendritic cells (1, 4). ALCAM mediates low-affinity adhesion with itself or the cysteine-rich scavenger receptor CD6 to regulate T cell development, immunological synapses (IS), and cell migration through endothelial junctions (1-11). ALCAM on thymic epithelia mediates adhesion to CD6 on $CD4^+CD8^+$ T cells (6). Adhesion of ALCAM-expressing antigen presenting cells and CD6-expressing T cells stabilizes the early IS, while later it enhances CD3 effects on T cell proliferation, CD25 expression, and Th1 commitment (4, 7, 8). High ALCAM expression at the blood-brain barrier in active multiple sclerosis, and its mouse model (EAE), promotes leukocyte migration to the brain (8, 9). High ALCAM expression on melanoma cell lines appears to be pro-metastatic, but anti-metastatic activity has been reported in breast cancer (3, 10, 11). ALCAM may influence expression or adhesion of the neuronal adhesion molecule NCAM-L1, both in the developing retina and invasive melanoma (2, 12).

References:

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