Biotinylated Recombinant Human CD155/PVR

Catalog Number: BT9174

DESCRIPTION

Source

Human embryonic kidney cell, HEK293-derived

Biotinylated via sugars

N-terminal Sequence Analysis	Asp28
Structure / Form	Disulfide-linked homodimer
Predicted Molecular Mass	61 kDa (unlabeled)

SPECIFICATIONS

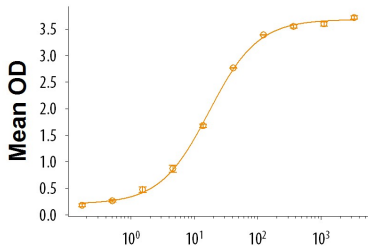
SDS-PAGE	
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Human CD96v2 Fc Chimera (Catalog # 9556-CD) is coated at 1 ug/mL, 100 µL/well, the concentration of Biotinylated Recombinant Human CD155/PVR Fc Chimera that produces 50% of the optimal binding response is 8-48 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 with polar packs. 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 Human CD96v2 Fc Chimera (Catalog # 9556-CD) is coated at 1 µg/mL, Biotinylated Recombinant Human CD155/PVR Fc Chimera (Catalog # BT9174) binds with an ED_{50} of 8-48 ng/mL.

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BACKGROUND

CD155, also known as PVR (poliovirus receptor), Necl-5 (nectin-like molecule-5) and, in rodents, TAGE4 (tumor-associated glycoprotein E4), is a 70 kDa type I transmembrane glycoprotein in the nectin-related family of adhesion proteins within the immunoglobulin superfamily (1, 2). CD155 binds other molecules including Vitronectin, Nectin-3, DNAM-1/CD226, CD96, and TIGIT but does not bind homotypically (3). Mature human CD155 consists of a 323 amino acid (aa) extracellular domain (ECD) with one N-terminal V-type and two C2-type Ig-like domains, a 24 aa transmembrane segment, and a 50 aa cytoplasmic tail. Within the ECD, human CD155 shares 45% aa sequence identity with mouse and rat CD155, and 52% with human Nectin-2. The V-type domain of CD155 mediates all binding, including to polio virus (1), and alternative splicing within this domain in humans can modulate ligand binding (4). Human CD155 can also be spliced to generate secreted isoforms (5). CD155 is up-regulated on endothelial cells by IFN-γ and is highly expressed on immature thymocytes, lymph node dendritic cells, and tumor cells of epithelial and neuronal origin (1, 2, 6-9). It is preferentially expressed on Th17 cells compared to Th2 cells (10), and its activation promotes the development of Th1 responses (11). On migrating cells, CD155 is concentrated at the leading edge, where it binds basement membrane Vitronectin, recruits Nectin-3-expressing cells, and cooperates with PDGF and Integrin αvβ3 to promote cell migration (1, 3, 12). Enhanced CD155 expression in tumor cells contributes to loss of contact inhibition and increased migration but also allows tumor cell recognition and killing by DNAM-1 or CD96 expressing NK cells (1, 7, 13). Binding of monocyte DNAM-1 to endothelial cell CD155 promotes transendothelial migration (8). The expression of CD155 on mouse $CD8^+$ thymocytes prevents their premature exit from the thymus (14). Within intestinal Peyer's patches, follicular dendritic cell CD155 activates follicular helper T cells via DNAM-1 or CD96 binding (7-9, 15). CD155 also binds the inhibitory ligand TIGIT on NK and some mature T cells, antagonizing DNAM-1 effects (7, 15, 16).

References:

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