

**DESCRIPTION**

<b>Source</b>	Mouse myeloma cell line, NS0-derived human CD155/PVR protein Gly27-Asn343, with a C-terminal 6-His tag Accession # AAH15542.1
<b>N-terminal Sequence Analysis</b>	Gly27
<b>Structure / Form</b>	Labeled with Alexa Fluor® 488 via amines Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
<b>Predicted Molecular Mass</b>	35 kDa

**SPECIFICATIONS**

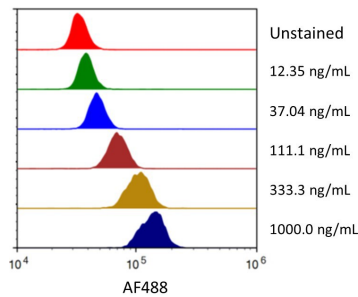
<b>SDS-PAGE</b>	60-70 kDa, under reducing conditions.
<b>Activity</b>	Measured by flow cytometry for its ability to bind anti-human CD155/PVR Monoclonal Antibody conjugated beads. The concentration of Recombinant Human CD155/PVR His-tag Alexa Fluor® 488 (Catalog # AFG2530) that produces 50% of the binding response is 25.0-250 ng/mL.
<b>Endotoxin Level</b>	<1.0 EU per 1 µg of the protein by the LAL method.
<b>Purity</b>	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
<b>Formulation</b>	Supplied as a 0.2 µm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

**PREPARATION AND STORAGE**

<b>Shipping</b>	The product is shipped with dry ice or equivalent. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<b>Protect from light. Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>• 6 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after opening.</li> <li>• 3 months, -20 to -70 °C under sterile conditions after opening.</li> </ul>

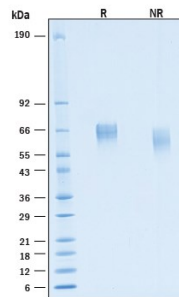
**DATA**

**Flow Cytometry**



**Flow cytometry analysis for Recombinant Human CD155 His-tag Alexa Fluor® 488 staining on Human CD155 Monoclonal Antibody conjugated beads.** Streptavidin coated beads conjugated to biotinylated Human CD155 were stained with the indicated concentrations of Recombinant Human CD155 His-tag Alexa Fluor® 488 (Catalog # AFG2530).

**SDS-PAGE**



**Recombinant Human CD155/PVR His-tag Alexa Fluor® 488 Protein SDS-PAGE.** 2 µg/lane of Recombinant Human CD155/PVR His-tag Alexa Fluor® 488 Protein (Catalog # AFG2530) 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.

**BACKGROUND**

CD155, also known as PVR (poliovirus receptor), Nectin-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- $\gamma$  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  $\alpha\beta 3$  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:**

1. Mandai, K. *et al.* (2015) *Curr. Top. Dev. Biol.* **112**:197.
2. Mendelsohn, C.L. *et al.* (1989) *Cell* **56**:855.
3. Sato, T. *et al.* (2004) *Genes to Cells* **9**:791.
4. Meyer, D. *et al.* (2009) *J. Biol. Chem.* **284**:2235.
5. Koike, S. *et al.* (1990) *EMBO J.* **9**:3217.
6. Escalante, N.K. *et al.* (2011) *Arterioscler. Thromb. Vasc. Biol.* **31**:1177.
7. Xu, Z. and B. Jin (2010) *Cell. Mol. Immunol.* **7**:11.
8. Reymond, N. *et al.* (2004) *J. Exp. Med.* **199**:1331.
9. Maier, M.K. *et al.* (2007) *Eur. J. Immunol.* **37**:2214.
10. Lozano, E. *et al.* (2013) *J. Immunol.* **191**:3673.
11. Yamashita-Kanemaru, Y. *et al.* (2015) *J. Immunol.* **194**:5644.
12. Mueller, S. and E. Wimmer (2003) *J. Biol. Chem.* **278**:31251.
13. Chan, C.J. *et al.* (2010) *J. Immunol.* **184**:902.
14. Qui, Q. *et al.* (2010) *J. Immunol.* **184**:1681.
15. Seth, S. *et al.* (2009) *Eur. J. Immunol.* **39**:3160.
16. Stanitsky, N. *et al.* (2009) *Proc. Natl. Acad. Sci. USA* **106**:17858.

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