

Recombinant Human CD161/CLEC5B-Fc Chimera (carrier-free)

Catalog# / Size	780302 / 10 µg 780304 / 25 µg 780306 / 100 µg
Regulatory Status	RUO
Other Names	KLRB1, CD161, NKR-P1A, NKR, Killer cell lectin-like receptor subfamily B member 1, C-type lectin domain family 5 member B, HNKRP-1a, NKR-P1A, Natural killer cell surface protein P1A, NKR-P1A, NKR-P1
Description	CLEC5B (CD161, KLRB1, NKR-P1A) is a C-type lectin protein belonging to the natural killer (NK) cell receptor family. Human CLEC5B is a 225 amino acid type II transmembrane glycoprotein. It contains a 158 amino acid extracellular domain with several motifs characteristic of C-type lectins, a 29 amino acid transmembrane domain, and a 38 amino acid cytoplasmic domain. CLEC5B plays an inhibitory role on NK cells by binding to CLEC2D/LLT1 and inhibiting NK cell-mediated cytotoxicity as well as interferon-gamma secretion in target cells. CLEC5B also reportedly acts as a potentiation receptor on T cells to increase IFN-gamma production in concert with TCR engagement. CLEC5B is known to be expressed by a distinct set of lymphocytes, in a subset of NK cells predominantly in intestinal epithelium and liver. It is also detected in peripheral blood T-cells, preferentially in adult T-cells with a memory antigenic phenotype.

Product Details

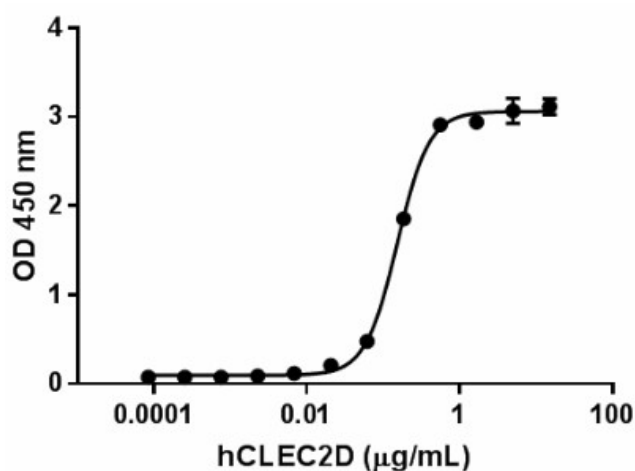
Source	Human CD161/CLEC5B, amino acid Gln67-Ser225 (Accession # Q12918) with a C-terminal human IgG Fc and 6His tag was expressed in CHO cells.
Molecular Mass	The 403 amino acid recombinant protein has a predicted molecular mass of approximately 46 kD. The DTT-reduced proteins migrate at approximately 60 kD, and non-reduced proteins migrate at approximately 115 kD by SDS-PAGE. The predicted N-terminal amino acid is Gln.
Purity	>95%, as determined by Coomassie stained SDS-PAGE.
Formulation	0.22 µm filtered protein solution is in PBS, pH 7.2.
Endotoxin Level	Less than 0.1 EU per µg protein as determined by the LAL method.
Concentration	10 and 25 µg sizes are bottled at 200 µg/mL. 100 µg size is lot-specific and bottled at the concentration indicated on the vial. To obtain lot-specific concentration, please enter the lot number in our Concentration and Expiration Lookup or Certificate of Analysis online tools.
Storage & Handling	Unopened vial can be stored between 2°C and 8°C for up to 2 weeks, at -20°C for up to six months, or at -70°C or colder until the expiration date. For maximum results, quick spin vial prior to opening. The protein can be aliquoted and stored at -20°C or colder. Stock solutions can also be prepared at 50 - 100 µg/mL in appropriate sterile buffer, carrier protein such as 0.2 - 1% BSA or HSA can be added when preparing the stock solution. Aliquots can be stored between 2°C and 8°C for up to one week and stored at -20°C or colder for up to 3 months. Avoid repeated freeze/thaw cycles.
Activity	When human CD161/CLEC5B is immobilized at 2.0 µg/mL, biotinylated human CLEC2D binds with an EC ₅₀ of 75 - 300 ng/mL. HRP Avidin (Cat. No. 405103) was used to detect the binding.
Application	Bioassay
Additional Product Notes	BioLegend carrier-free recombinant proteins provided in liquid format are shipped on blue ice. Our comparison testing data indicates that when handled and stored as recommended, the liquid format has equal or better stability and shelf-life compared to commercially available lyophilized proteins after reconstitution. Our liquid proteins are verified in-house to maintain activity after shipping on blue ice and are backed by our 100% satisfaction guarantee . If you have any concerns, contact us at tech@biolegend.com .

Antigen Details

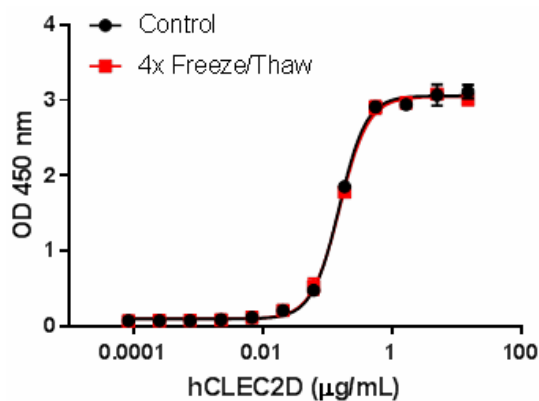
Ligand/Receptor	CLEC2D
Bioactivity	Measured by its ability to bind CLEC2D
Cell Sources	Interacts with acid sphingomyelinase/SMPD1
Cell Type	NK cells, T cells, Thymocytes
Biology Area	Cell Biology, Immunology, Innate Immunity, Signal Transduction
Molecular Family	CD Molecules, Soluble Receptors
Antigen References	<ol style="list-style-type: none"> 1. Lanier LL, <i>et al.</i> 1994. <i>J. Immunol.</i> 153:2417-28. 2. Poggi A, <i>et al.</i> 1998. <i>Eur. J. Immunol.</i> 28:1611-6. 3. Aldemir H, <i>et al.</i> 2005. <i>J. Immunol.</i> 175:7791-5. 4. Rosen DB, <i>et al.</i> 2005. <i>J. Immunol.</i> 175:7796-9. 5. Pozo D, <i>et al.</i> 2006. <i>J. Immunol.</i> 176:2397-406. 6. Germain C, <i>et al.</i> 2010. <i>J. Biol. Chem.</i> 285:36207-15.

Gene ID [3820](#)

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Stability testing for Human CD161/CLEC5B. Human CD161/CLEC5B was aliquoted in PBS, pH 7.2 at 0.2 mg/mL. One aliquot was frozen and thawed four times (4x Freeze/Thaw), and compared to a control kept at 4°C (Control). The samples were tested for their ability to bind human CLEC2D.

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BioLegend Inc., 8999 BioLegend Way, San Diego, CA 92121 www.biolegend.com
Toll-Free Phone: 1-877-Bio-Legend (246-5343) Phone: (858) 768-5800 Fax: (877) 455-9587

