

Recombinant Mouse B7-H3 (carrier-free)

Catalog# / Size	787002 / 10 µg 787004 / 25 µg 787006 / 100 µg
Regulatory Status	RUO
Other Names	CD276, CD276 Antigen, B7 Homolog 3, 4Ig-B7-H3, B7H3, B7RP-2
Description	Mouse B7-H3 is a member of the B7 family. It is a type 1 transmembrane glycoprotein, and its extracellular domain contains one IgV- and one IgC-like domains. Mouse B7-H3 contains 316 amino acids and has 92.7% similarity with the human protein. B7-H3 mRNA is expressed in many tissues; nevertheless, the protein is not constitutively present. TREM-like transcript 2 (TLT2) has been described as a possible receptor (in mouse) for B7-H3. TLT2 is expressed in CD8 ⁺ T cells and the interaction between B7-H3 and TLT2 increases CD8 ⁺ T cell activation. Studies using B7-H3 knockout mice and experimental models show that B7-H3 KO mice have less inflammation and limited disease progression in EAE and CIA. Those results were accompanied by a reduction in IFN-γ and IL-17 production. This data suggests that B7-H3 possesses a costimulatory function on Th1/Th17. Nevertheless, the B7-H3 KO mice developed severe ovalbumin-induced asthma with an increase in eosinophils, IL-5, IL-13, and elevated IgE. These parameters suggest a co-inhibitory function of B7-H3 on Th2 responses. B7-H3 is expressed by multiple cancer cells and its inhibition diminishes tumor development in cancer models.

Product Details

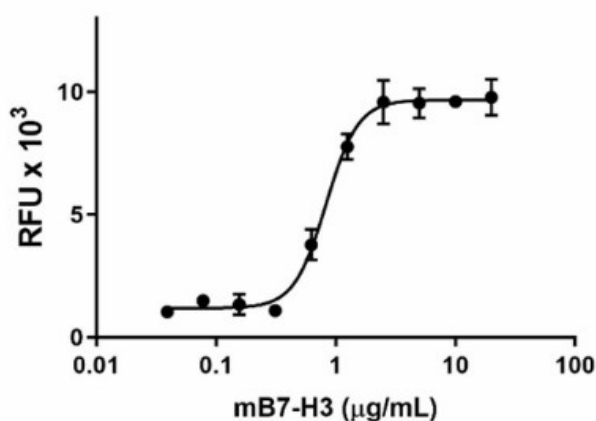
Source	Mouse B7-H3, amino acid (Val29 - Phe244) (Accession: #Q8VE98.1) was expressed in CHO cells. The carboxy terminus contains a GS10His tag.
Molecular Mass	The 228 amino acid recombinant protein has a predicted molecular mass of approximately 25 kD. The DTT-reduced and non-reduced protein migrates at approximately 40-45 kD by SDS-PAGE. The predicted N-terminal amino acid is Val.
Purity	>95%, as determined by Coomassie stained SDS-PAGE.
Formulation	0.22 µm filtered protein solution is in PBS pH7.2.
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 and larger sizes are 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	Mouse B7-H3 induces proliferation of activated mouse T cells in a dose-dependent manner. The ED ₅₀ for this effect is 0.5 – 3.0 µg/mL.
Application	Bioassay
Application 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

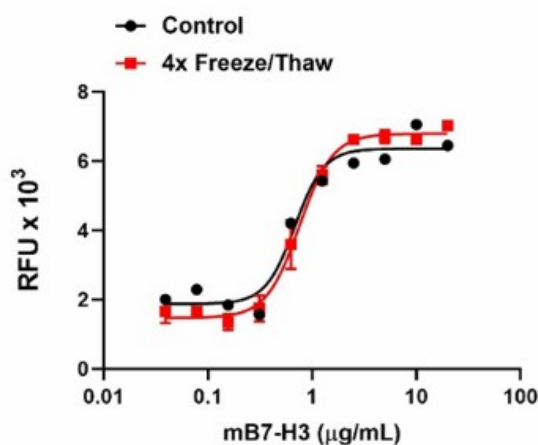
Structure	Monomer
Distribution	Ubiquitously expressed, activated T cells, dendritic cells, monocytes/macrophages, anterior pituitary progenitor cells, muscle cells, fibroblast-like synoviocytes, and epithelial cells. Numerous tumor lines, tumor-infiltrating dendritic cells, and macrophages.
Function	Regulates T-cell-mediated immune response, induces T cell proliferation and IFN- γ production. Induced by inflammatory cytokines on dendritic cells and monocytes.
Interaction	Activated T cells
Ligand/Receptor	TRML2/ TLT2
Bioactivity	Mouse B7-H3 induces proliferation in mouse activated T cells.
Cell Type	Dendritic cells, Endothelial cells, Macrophages, Monocytes, T cells, Th1, Th17, Th2
Biology Area	Adaptive Immunity, Costimulatory Molecules, Immuno-Oncology, Immunology
Antigen References	<ol style="list-style-type: none"> 1. Chapoval AI, <i>et al.</i> 2001. <i>Nat Immunol.</i> 2:269. 2. Sun M, <i>et al.</i> 2002. <i>J Immunol.</i> 168:6294. 3. Hashiguchi M, <i>et al.</i> 2008. <i>Proc Natl Acad Sci U S A.</i> 105:10495. 4. Nagai Y, <i>et al.</i> 2008. <i>J Immunol.</i> 181:6073. 5. Waschbisch A, <i>et al.</i> 2008. <i>Arthritis Rheum.</i> 58:3600. 6. Kobori H, <i>et al.</i> 2010. <i>Immunology.</i> 130:363. 7. Luo L, <i>et al.</i> 2015. <i>PLoS One.</i> 10(6):e0130126.

Gene ID [102657](#)

Product Data



Recombinant Mouse B7-H3 induces proliferation of mouse CD3-activated T cells in a dose-dependent manner. The ED₅₀ for this effect is 0.5 - 3 µg/mL.



Stability Testing for Recombinant Mouse B7-H3. Recombinant Mouse B7-H3 was aliquoted in PBS, pH 7 at 0.2 mg/mL. One aliquot was frozen and thawed four times (4x Freeze/Thaw) and compared to the control that was kept at 4°C (Control). The samples were tested for their ability to induce proliferation of mouse CD3-activated T cells in a dose-dependent manner. The ED₅₀ for this effect is 0.5 - 3 µg/mL.

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