Recombinant Human B7-H3 Fc Chimera Alexa Fluor® 647

Catalog Number: AFR1027

DESCRIPTION

Source

Mouse myeloma cell line, NS0-derived human B7-H3 protein

Human B7-H3 (Leu29-Pro245) Accession # NP_079516.1	DIEGRMD	Human IgG_1 (Pro100-Lys330)

N-terminus C-terminus

N-terminal Sequence Analysis

Leu29

Structure / Form

Disulfide-linked homodimer
Labeled with Alexa Fluor® 647
Excitation Wavelength: 650 nm
Emission Wavelength: 668 nm

Predicted Molecular Mass

50 kDa (monomer)

SPECIFICATIONS

SDS-PAGE

70-80 kDa, under reducing conditions.

Activity

Measured by flow cytometry for its ability to bind anti-human B7-H3 Antibody conjugated beads. The concentration of Recombinant Human B7-H3 Fc Chimera Alexa Fluor® 647 (Catalog # AFR1027) that produces 50% of the binding response is 6.00-60.0 ng/mL.

Endotoxin Level

<1.0 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

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

Shipping

The product is shipped with dry ice or equivalent. Upon receipt, store it immediately at the temperature recommended below.

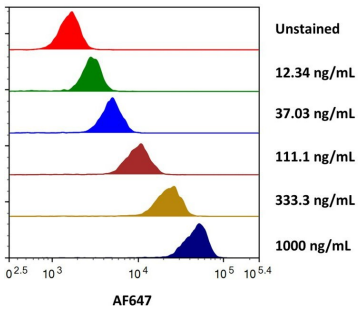
Stability & Storage

Protect from light. Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 6 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after opening.
- 3 months, -20 to -70 °C under sterile conditions after opening.

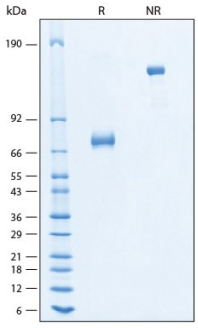
DATA

Flow Cytometry



Flow cytometry analysis for Recombinant Human B7-H3 Fc Chimera Alexa Fluor® 647 staining on anti-human B7-H3 Antibody conjugated beads. Streptavidin coated beads conjugated to biotinylated anti-human B7-H3 Antibody were stained with the indicated concentrations of Recombinant Human B7-H3 Fc Chimera Alexa Fluor® 647 (Catalog # AFR1027).

SDS-PAGE



Recombinant Human B7-H3 Fc Chimera Alexa Fluor® 647 Protein SDS-PAGE. 2 µg/lane of Recombinant Human B7-H3 Fc Chimera Alexa Fluor® 647 Protein (Catalog # AFR1027) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 70-80 kDa and 140-160 kDa, respectively.

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BACKGROUND

Human B7 homolog 3 (B7-H3) is a member of the B7 family of immune proteins that provide signals for regulating immune responses (1-3). Other family members include B7-1, B7-2, B7-H2, PD-L1 (B7-H1), and PD-L2. B7 proteins are immunoglobulin (Ig) superfamily members with extracellular Ig-V-like and Ig-C-like domains and short cytoplasmic domains. Among the family members, they share about 20-40% amino acid (aa) sequence identity. The cloned human B7-H3 cDNA encodes a 316 aa type I membrane precursor protein with a putative 28 aa signal peptide, a 217 aa extracellular region containing one V-like and one C-like Ig domain, a transmembrane region, and a 45 aa cytoplasmic domain. An isoform of human B7-H3 containing a four-Ig-like domain extracellular region has also been identified. Human B7-H3 is not expressed on resting B cells, T cells, monocytes or dendritic cells, but is induced on dendritic cells and monocytes by inflammatory cytokines. B7-H3 expression is also detected on various normal tissues and in some tumor cell lines. Human B7-H3 does not bind any known members of the CD28 family of immunoreceptors. However, B7-H3 has been shown to bind an unidentified counter-receptor on activated T cells to costimulate the proliferation of $CD4^+$ or $CD8^+$ T cells. B7-H3 has also been found to enhance the induction of primary cytotoxic T lymphocytes and stimulate IFN-γ production (1-3).

References:

1. Chapoval, A.I. *et al.* (2001) Nat. Immunol. **2**:269.
2. Sharpe, A.H. and G.J. Freeman (2002) Nat. Rev. Immunol. **2**:116.
3. Coyle, A. and J. Gutierrez-Ramos (2001) Nat. Immunol. **2**:203.

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