

DESCRIPTION

Source	Human embryonic kidney cell, HEK293-derived human B7-H4 protein		
	Human B7-H4 (Phe29-Ala258) Accession # Q7Z7D3.1	IEGRMD	Human IgG ₁ (Pro100-Lys330)
	N-terminus		C-terminus
N-terminal Sequence Analysis	Phe29		
Structure / Form	Disulfide-linked homodimer Labeled with Alexa Fluor® 488 via amines Excitation Wavelength: 488 nm Emission Wavelength: 515–545 nm		
Predicted Molecular Mass	52 kDa		

SPECIFICATIONS

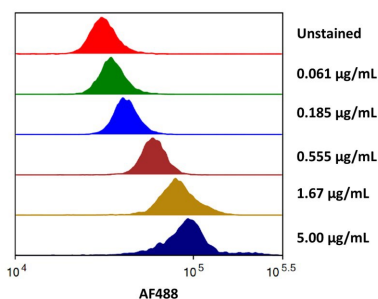
SDS-PAGE	78-90 kDa, under reducing conditions.
Activity	Measured by flow cytometry for its ability to bind anti-human B7-H4 Antibody conjugated beads. The concentration of Recombinant Human B7-H4 Fc Chimera Alexa Fluor® 488 (Catalog # AFG8870) that produces 50% of the binding response is 0.200-2.00 µg/mL.
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.

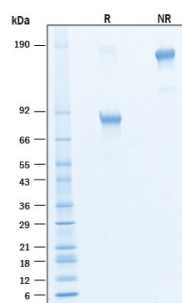
DATA

Flow Cytometry



Flow cytometry analysis for Recombinant Human B7-H4 Fc Chimera Alexa Fluor® 488 Protein staining on Human B7-H4 Antibody conjugated beads. Streptavidin coated beads conjugated to biotinylated Human B7-H4 were stained with the indicated concentrations of Recombinant Human B7-H4 Fc Chimera Alexa Fluor® 488 Protein (Catalog# AFG8870).

SDS-PAGE



Recombinant Human B7-H4 Fc Chimera Alexa Fluor® 488 Protein SDS-PAGE. 2 µg/lane of Recombinant Human B7-H4 Fc Chimera Alexa Fluor® 488 Protein (Catalog # AFG8870) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 78-90 kDa and 156-180 kDa, respectively.

BACKGROUND

B7-H4, also known as B7x and B7S1, is a 50-80 kDa glycosylated member of the B7 family of immunomodulatory proteins (1, 2). Mature human B7-H4 consists of a 235 amino acid (aa) extracellular domain (ECD) with one Ig-like V-set domain and one Ig-like C2-set domain, a 21 aa transmembrane segment, and a 2 aa cytoplasmic tail (3-5). Within the ECD, human B7-H4 shares 90% aa sequence identity with mouse and rat B7-H4. It shares 22% - 28% aa sequence identity with human B7-1, B7-2, B7-H1, B7-H2, B7-H3, and PD-L2. Alternate splicing of human B7-H4 generates an additional isoform that lacks the first Ig-like domain. B7-H4 is expressed on the surface of activated lymphocytes, macrophages, monocytes, dendritic cells, epithelial cells, and bone marrow-derived mesenchymal stem cells (4-8). Its binding to activated T cells dampens T cell responses and induces cell cycle arrest in the T cell (3-5). Reverse signaling can induce either cell cycle arrest or apoptosis in the B7-H4 expressing cell (9, 10). B7-H4 is up-regulated in several carcinomas in correlation with tumor progression and metastasis (2, 7, 11, 12). A soluble form of B7-H4 is elevated in the serum of ovarian cancer, renal cell carcinoma, and rheumatoid arthritis patients, also in correlation with advanced disease status (13-15). Soluble B7-H4 functions as a decoy molecule that blocks the inhibitory influence of B7-H4 on immune activation (15). Despite evidence for the involvement of B7-H4 in immune regulation, mice deficient in its expression do not show significant immune deficiencies, suggesting compensation by other molecules *in vivo* (16).

References:

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