Product Name: Human 4Ig-B7H3 Protein Dimer, His Tag

Product Code: CSP-260984-01

FOR RESEARCH USE ONLY (RUO)

Protein Name: B7H3 isoform 4Ig, Protein Dimer

Alternate Name(s): Cluster of Differentiation 276 (CD276), 4IgB7-H3, 4Ig-B7H3, B7-H3, B7H3, B7RP-2

Expression Host
HEK293T

Amino Acid Range
L29 - A466

Protein Construct
4Ig-B7H3 dimer protein contains a 4Ig-B7H3 extracellular domain with two pairs of IgV-like and IgC-like immunoglobulin domains (UniProt# Q5ZPR3-1) fused with a proprietary dimer motif followed by a His tag at the C-terminus. Expressed in HEK293T cell line.

SDS-Page Molecular Weight
114 kDa. The migration range of the dimer protein with glycosylation under non-reducing condition is 190 kDa on SDS PAGE.

Purity
Greater than 90% dimer form as determined by SDS-PAGE under non-reducing condition

Shipping Conditions
Frozen Ice Packs

Stability & Storage
-20^0C

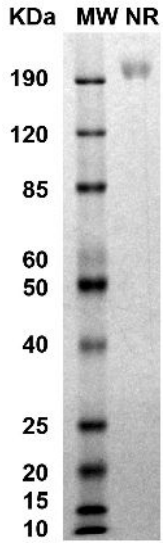
Formulation
Lyophilized from 0.22 μm filtered solution in PBS, pH 7.4 with 10% trehalose as protectant

Reconstitution of lyophilized product
For best performance, we strongly recommend you reconsitute the lyophilized product with deionized water to a stock solution of 500 μg/mL.
Solubilize for 20 minutes at room temperature with occasional gentle mixing. Avoid shaking or vortexing.

For 25μg product size:
Reconstitute with 50 μL sterile deionized water.

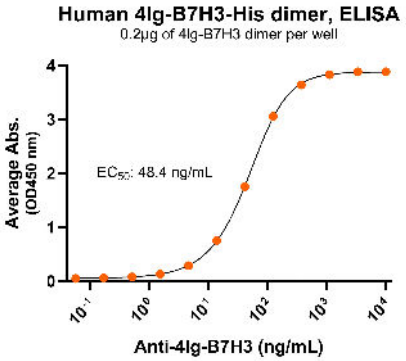
For 100μg product size:
Reconstitute with 200 μL sterile deionized water.

SDS-PAGE



MW: Molecular Weight marker reduced condition
NR: B7H3-4Ig dimer under non-reduced condition
The migration range of the dimer protein with glycosylation under non-reducing condition is 190 kDa on SDS PAGE.

Antibody Binding



Immobilized human B7H3-4Ig-His dimer protein (CSP-260984-01) at 2 μg/mL (100 μL/well) can bind anti-human B7H3 monoclonal antibody with half maximal effective concentration (EC50) range of 24.2-96.8 ng/mL (QC tested).

Background

Human B7 Homolog 3 (B7H3, B7-H3) is a member of the B7 family of immune checkpoint proteins involved in regulating immune responses. Human B7H3 has 2 isoforms: 2Ig-B7H3 (2Ig-B7-H3, 2IgB7H3) and 4Ig-B7H3 (4Ig-B7-H3, 4IgB7H3). B7H3 is a Type I membrane protein characterized by an extracellular domain, a transmembrane domain and a cytoplasmic domain. The 4Ig-B7H3 isoform contains two pairs of IgV-like and IgC-like immunoglobulin domains while the 2Ig-B7H3 isoform has a single pair of IgV-like and IgC-like immunoglobulin domains in the extracellular region. B7H3 is also known as B7-H3, Cluster of Differentiation 276 (CD276), and B7RP-2. B7H3 has limited expression on normal tissues but is highly expressed in many cancer cells including lung, kidney, ovarian, colorectal, liver, and breast cancers, which can contribute to immune evasion by inhibiting T cell activation. B7H3 can form a dimer that is critical for its function and can more effectively interact with its receptor(s) on T cells and other immune cells. B7H3 is overexpressed in up to 60% of all cancers and due to its selective expression on solid tumors B7H3 has become a critical target for cancer therapies.