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**Product Name: Bioactive, Human BCMA Protein Tetramer, His Tag**

**Product Code: CSP-26402.M4-01**

**FOR RESEARCH USE ONLY (RUO)**

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**Protein Name:** BCMA-M4

**Alternate Name(s):** tumor necrosis factor receptor superfamily member 17, TNFRSF17, BCM, CD269, TNFRSF13A, TNF receptor superfamily member 17

**Expression Host**  
HEK293T

**Amino Acid Range**  
L2 - A54

**Protein Construct**

BCMA tetramer protein contains a BCMA extracellular domain (UniProt# Q02223) fused with a proprietary tetramer motif followed by a His tag at the C-terminus. Expressed in HEK293T cell line.

**SDS-Page Molecular Weight**

39 kDa. The migration range of the protein dimer with glycosylation under non-reducing condition is 70 to 120 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°C

**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 reconstitute 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:

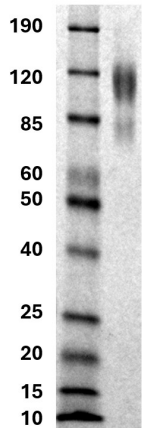
Reconstitute with 50 µL sterile deionized water.

For 100µg product size:

Reconstitute with 200 µL sterile deionized water.

## SDS-PAGE

KDa MW NR



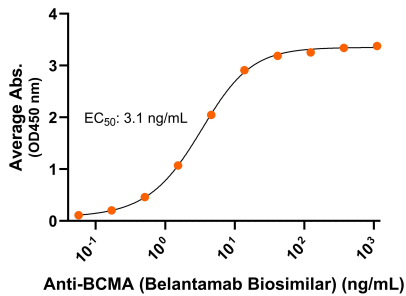
MW: Molecular Weight marker reduced condition

NR: BCMA tetramer under non-reduced condition

The migration range of the protein dimer with glycosylation under non-reducing condition is 70 to 120 kDa on SDS-PAGE.

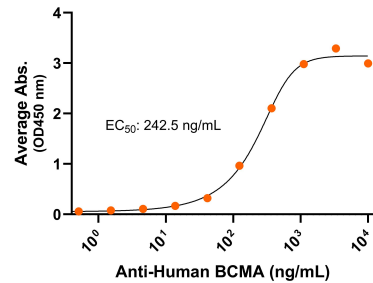
## Antibody Binding

**Human BCMA-His Tetramer, ELISA**  
0.2µg of BCMA tetramer per well



Immobilized human BCMA-His protein tetramer (CSP-26402.M4-01) at 2 µg/mL (100 µL/well) can bind anti-human BCMA belantamab biosimilar monoclonal antibody with half maximal effective concentration (EC<sub>50</sub>) range of 1.6-6.2 ng/mL (QC tested).

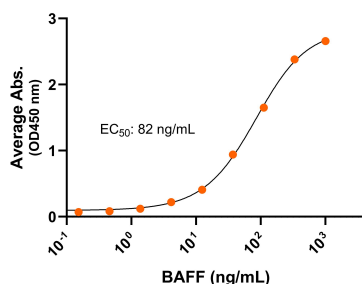
**Human BCMA-His Tetramer, ELISA**  
0.2µg of BCMA tetramer per well



Immobilized human BCMA-His protein tetramer (CSP-26402.M4-01) at 2 µg/mL (100 µL/well) can bind anti-human BCMA monoclonal antibody with half maximal effective concentration (EC<sub>50</sub>) range of 121.3-485 ng/mL (QC tested).

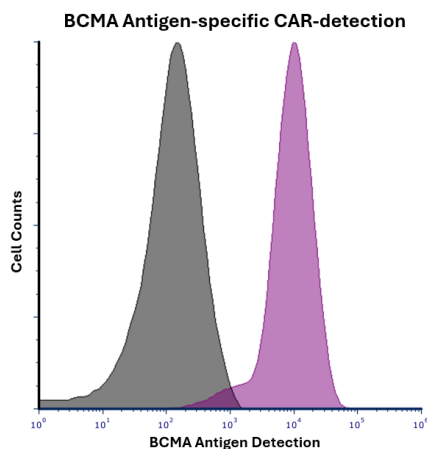
## Ligand Binding

**Human BCMA-His Tetramer / BAFF, ELISA**  
0.2 µg of BCMA tetramer per well



Immobilized human BCMA-His protein tetramer (CSP-26402.M4-01) at 2 µg/mL (100 µL/well) can bind human BAFF protein with half maximal effective concentration (EC50) range of 41-164 ng/mL (QC tested).

## Flow Cytometry Analysis



Flow cytometry analysis of anti-BCMA CAR expression on HEK293T cells transiently transfected with BCMA-specific scFv CAR construct. Transfected cells were stained with PE-conjugated anti-G4S linker antibody and Human BCMA Protein Tetramer His Tag (TS402-M4-01) followed by APC-conjugated anti-His tag antibody detection. Thereafter, flow cytometry analyses were performed to detect surface expression of the anti-BCMA CAR. The purple curve represents BMCA CAR expressing cells detected by Human BCMA Protein Tetramer His Tag (TS402-M4-01) while the black curve represents no BCMA protein staining. Mock transfected cells have no binding to either anti-G4S linker antibody or Human BCMA Protein Tetramer His Tag. The histogram shows that over 95% of anti-BCMA CAR are detected by Human BCMA Protein Tetramer His Tag (TS402-M4-01) on anti-G4S linker positive cells.

### **Background**

Human B-cell maturation antigen (BCMA) is a cell surface receptor in the TNF receptor superfamily. BCMA is also known as tumor necrosis factor receptor superfamily member 17 (TNFRSF17), BCM, and CD269. BCMA contains a short conserved extracellular domain at the N-terminus called the BCMA TALL-1 binding domain which binds its ligand B-cell activating factor (BAFF). BCMA is expressed primarily on B cells in the later stages of differentiation and is essential for the survival of long-lived plasma cells, however, it is significantly overexpressed in multiple myeloma cells. BCMA has also been implicated in leukemia and lymphomas which has made BCMA a crucial target for therapeutic antibodies and CAR-T therapy.