Product Name: Human MICA Protein Dimer, His-Avi Tag

Product Code: CSP-26327-03

FOR RESEARCH USE ONLY (RUO)

Protein Name: MICA

Alternate Name(s): MIC-A, PERB11.1, MHC class I chain–related protein A, MHC class I polypeptide–related protein A

Expression Host
HEK293T

Amino Acid Range
E24 - W307

Protein Construct
MICA dimer protein contains a MICA extracellular domain (UniProt# Q29983) fused with a proprietary cis-dimer motif followed by a tandem His-Avi tag at the C-terminus. Expressed in HEK293T cell line.

SDS-Page Molecular Weight
82 kDa. Migration range of the dimer protein with glycosylation under non-reducing condition is 120-190 kDa on SDS PAGE

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

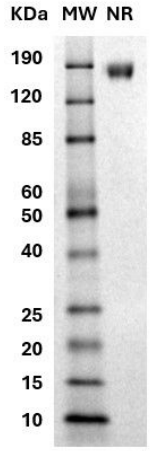
Shipping Conditions
Product is shipped at ambient temperature.

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

Stability & Storage
On receipt, store at -20 C or lower for long term storage.
This product is stable at:
-20 to -70 C for 12 months from date of receipt in lyophilized state.
-70 C for 3 months after reconstitution under sterile conditions.
Avoid repeated freeze-thaw cycles

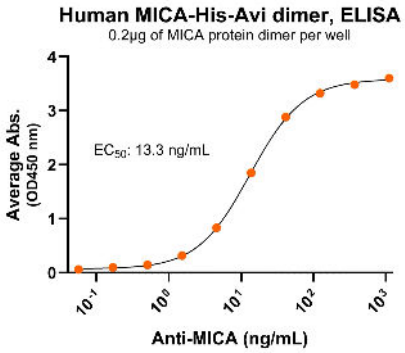
Reconstitution of lyophilized product
For best performance, we strongly recommend you reconstitute the lyophilized product with deionized water to a stock solution of 500 μg/mL.
Solubilize for 20 minutes at room temperature with occasional gentle mixing. Avoid shaking or vortexing.
For 25μg product size:
Reconstitute with 50 μL sterile deionized water.
For 100μg product size:
Reconstitute with 200 μL sterile deionized water.

SDS-PAGE



MW: Molecular Weight marker reduced condition
NR: MICA dimer under non-reduced condition
Migration range of the dimer protein with glycosylation under non-reducing condition is 120-190 kDa on SDS PAGE

Antibody Binding



Immobilized human MICA-His-Avi dimer protein (CSP-26327-03) at 2 μg/mL (100 μL/well) can bind anti-human MICA monoclonal antibody with half maximal effective concentration (EC50) range of 6.7-26.6 ng/mL (QC tested).

Background

Human MHC class I polypeptide–related sequence A (MICA) is a MHC class I family protein. MICA is also known as PERB11.1 and MHC class I chain–related protein A. MICA functions as a stress-induced ligand for integral membrane protein receptor natural-killer group 2, member D (NKG2D). MICA is a type 1 transmembrane protein. The expression is highly regulated, and minimally expressed in most healthy tissues and strongly induced by cellular stress. MICA is constitutively expressed at low levels in certain epithelial tissues that are frequently exposed to environmental stress. MICA is frequently overexpressed in response to oncogenic stress, DNA damage, and genomic instability. Some tumors shed large amounts of MICA and high

levels of MICA in the serum can be indicative of tumor growth with the amount of MICA present positively correlated to tumor size and poor prognosis. This behavior has made MICA an emerging target for cancer immunotherapy and cell therapy.