
Product Name: Human MICA Protein Dimer, His Tag

Product Code: CSP-26327-01

FOR RESEARCH USE ONLY (RUO)

Protein Name: MICA, Protein Dimer

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 His tag at the C-terminus. Expressed in HEK293T cell line.

SDS-Page Molecular Weight

82 kDa. Migration range of the dimer 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

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.

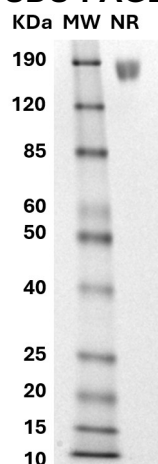
For 25µg product size:

Reconstitute with 50 µL sterile deionized water.

For 100µg product size:

Reconstitute with 200 µL sterile deionized water.

SDS-PAGE

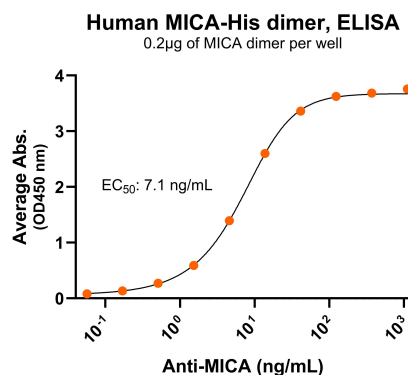


MW: Molecular Weight marker reduced condition

NR: MICA dimer under non-reduced condition

Migration range of the dimer under non-reducing condition is 120-190 kDa on SDS PAGE

Antibody Binding



Immobilized human MICA-His dimer protein (CSP-26327-01) at 2 µg/mL (100 µL/well) can bind anti-human MICA monoclonal antibody with half maximal effective concentration (EC₅₀) range of 3.5-14.2 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.