Human MICA Protein (His Tag) (HPLC-verified)

Catalog Number: **HPLC-12302-H08H**

General Information

Gene Name Synonym:

DAMA-345G11.2; FLJ36918; FLJ60820; MGC111087; MGC21250; MIC-A; PERB11.1

Protein Construction:

A DNA sequence encoding the human MICA (AAH16929.1) extracellular domain (Met 1-Gln 308) was fused with a polyhistidine tag at the C-terminus.

Source: Human

Expression Host: HEK293 Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE.
> 95 % as determined by SEC-HPLC.

Endotoxin:

< 1.0 EU per μg of the protein as determined by the LAL method

Predicted N terminal: Glu 24

Molecular Mass:

The recombinant human MICA consists of 296 amino acids and has a predicted molecular mass of 34 kDa. In SDS-PAGE under reducing conditions, the apparent molecular mass of rh MICA is approximately 55-65 kDa due to glycosylation.

Formulation:

Lyophilized from sterile PBS, pH 7.4.

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Stability & Storage:
Samples are stable for twelve months from date of receipt at -20℃ to -80℃.

Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

Protein Description

MHC class I chain-related molecules A (MICA) is one of the genes in the HLA class I region, which belongs to MHC class I family. It is the member of the non-classical class I family that displays the greatest degree of polymorphism. The MICA protein product is expressed on the cell surface, although unlike canonical class I molecules does not seem to associate with beta-2-microglobulin. It is thought that MICA functions as a stress-induced antigen that is broadly recognized by NK cells, NKT cells, and most of the subtypes of T cells. The Natural killer group 2D (NKG2D), a C-type lectin-like activating immunoreceptor, is a receptor of MICA, which was detected on most gammadelta T cells, CD8+ alphabeta T cells, and natural killer (NK) cells. Effector cells from all these subsets could be stimulated by ligation of NKG2D. Engagement of NKG2D activated cytolytic responses of gammadelta T cells and NK cells against transfectants and epithelial tumor cells expressing MICA. The MICA system is a novel, avidin-free immunohistochemical detection system that provides a significant increase in sensitivity compared to traditional immunodetection systems.

References

1.Choy MK, *et al.* (2010) MICA polymorphism: biology and importance in immunity and disease. Trends Mol Med. 16(3): 97-106. 2.Li J, *et al.* (2005) Distinct pattern of human Vdelta1 gammadelta T cells recognizing MICA. Cell Mol Immunol. 2(4): 253-8. 3.Mangham DC, *et al.* (2000) MICA-a highly sensitive and avidin-free immunohistochemical detection system. Adv Anat Pathol. 7(6): 360-4.

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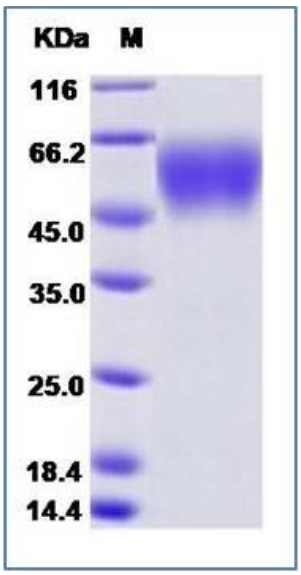
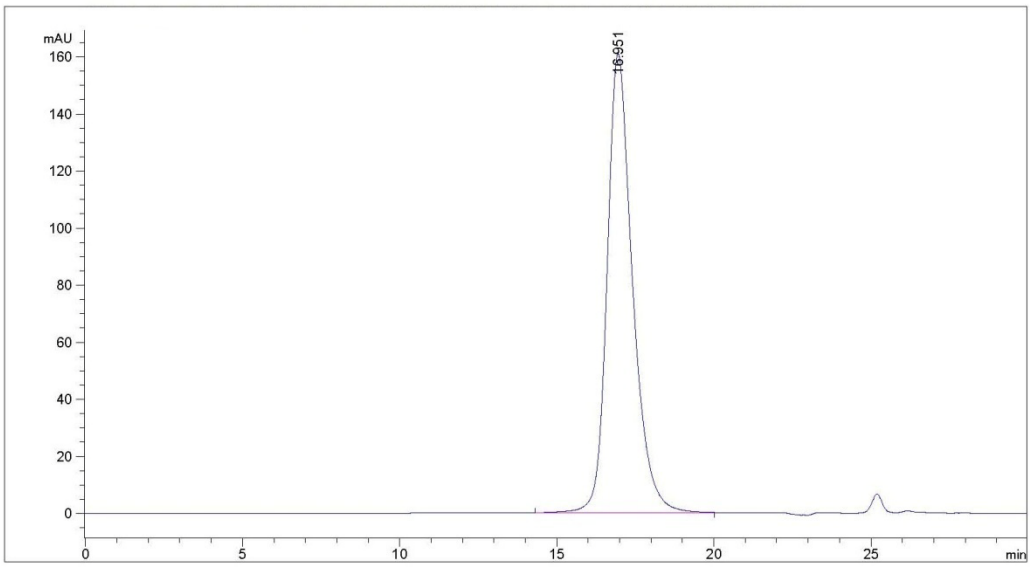
SDS-PAGE:



98.9% as determined by SDS-PAGE

SEC-HPLC:



100.0% as determined by SEC-HPLC Analysis

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