

Recombinant Human MICA Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP50668

Size: 10ug, 100ug

Protein Name: MHC class I polypeptide-related sequence A (MIC-A)

Synonym: MICA, PERB11.1

UniProt ID: Q29983

UniProt Link: www.uniprot.org/uniprotkb/Q29983/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 383 AA

Molecular Weight: 43 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MGLGPVFLLLAGIFPFAPPGAAAEPHSLRYNLTVLSWDGSVQSGFLTVEVHLDGQPFLRCDRQKCRA
KPQGQWAEDVLGNKTWDRETRDLTGNGKDLRMTLAHIKDQKEGLHSLQEIRVCEIHEDNSTRSSQH
FYYDGELFLSQNLETKEWTMPQSSRAQTLAMNVRNFLKEDAMKTKTHYHAMHADCLQELRRYLKS
GVVLRRTPPMVNVTRSEASEGNITVTCRASGFYPWNITLSWRQDGVSLSHDTQQWGDVLPDGNG
TYQTWVATRICQGEQRFCTYMEHSGNHSTHPVPSGKVLVLQSHWQTFHVSAAAAAIFVIIIIFYVR
CCKKKTSAEGPELVSLQVLDQHPVGTSDHRDATQLGFQPLMSDLGSTGSTEGA

3. Buffer Composition

Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

5. Product Description

This product is recombinant MHC class I polypeptide-related sequence A (MIC-A) produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

Protein Function: Widely expressed membrane-bound protein which acts as a ligand to stimulate an activating receptor KLRK1/NKG2D, expressed on the surface of essentially all human natural killer (NK), gamma delta T and CD8 alpha beta T-cells (PubMed:11491531, PubMed:11777960). Up-regulated in stressed conditions, such as viral and bacterial infections or DNA damage response, serves as signal of cellular stress, and engagement of KLRK1/NKG2D by MICA triggers NK-cells resulting in a range of immune effector functions, such as cytotoxicity and cytokine production (PubMed:10426993).

Subcellular Localization: Cell membrane ; Single-pass type I membrane protein . Cytoplasm .
Note=Expressed on the cell surface in gastric epithelium, endothelial cells and fibroblasts and in the cytoplasm in keratinocytes and monocytes. Infection with human adenovirus 5 suppresses cell surface expression due to the adenoviral E3-19K protein which causes retention in the endoplasmic reticulum.

6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.