

Human MICA Protein; His Tag(Q29983-1)

Product Information

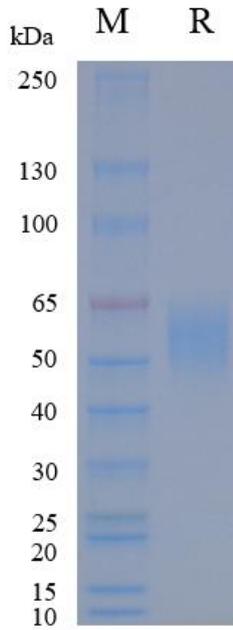
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|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Name | Human MICA Protein; His Tag(Q29983-1) |
| Storage temp | Store at $\leq -70^{\circ}\text{C}$, stable for 6 months after receipt. Recommend to aliquot the protein into smaller quantities for optimal storage. Please minimize freeze-thaw cycles. |
| Catalog# / Size | GM-88550RP-100 / 100 μg GM-88550RP-1000 / 1 mg |

Protein Information

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| Alternative Names | MIC-A, MHC class I polypeptide-related sequence A |
| Source | Human MICA Protein; His Tag(Q29983-1) (GM-88550RP) is expressed from human 293 cells (HEK-293). It contains AA Glu 24 - Trp 307 (Accession # Q29983-1). This protein carries a His tag at the C-terminus. |
| Purity | > 95% as determined by SDS-PAGE |
| Endotoxin | < 1 EU/ μg , determined by LAL gel clotting assay |
| Predicted Mol Mass | 33.6 KDa |
| Formulation | Supplied as a 0.2 μm filtered solution of PBS, pH7.2-7.4. |
| Description | MICA (MHC class I polypeptide-related sequence A) is a stress-induced ligand of the activating receptor NKG2D, primarily expressed on epithelial and tumor cells under cellular stress such as infection or transformation. It is a non-classical MHC I-like molecule located in the human MHC region, with multiple alleles and isoforms. Unlike classical MHC molecules, MICA does not present peptides; instead, surface MICA engages NKG2D on NK cells and some T cells to trigger cytotoxic responses and cytokine production. MICA signals mainly through the activating receptor NKG2D, promoting NK cell cytotoxicity and co-stimulating certain T cell responses. NKG2D engagement activates downstream pathways via adaptors such as DAP10, recruiting PI3K and other signaling molecules to drive cytotoxic granule release, cytokine production, and target-cell lysis. MICA-NKG2D signaling can also influence macrophages and $\gamma\delta$ T cells. Soluble MICA shed from the cell surface can dampen or alter immune responses, contributing to tumor immune evasion. Stress, inflammation, and proteolytic shedding shape the net effect on immune surveillance. |

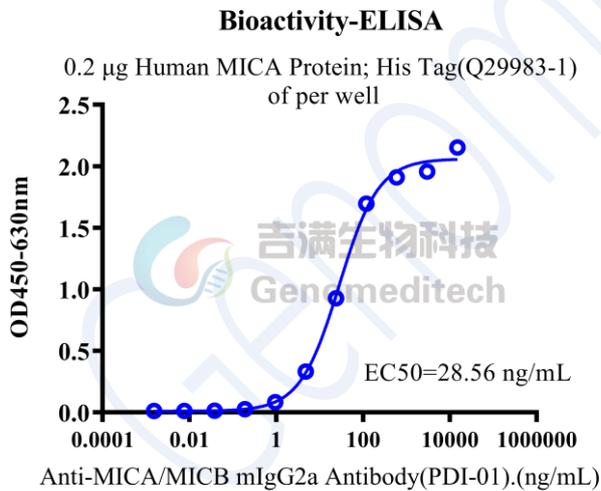
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SDS-PAGE

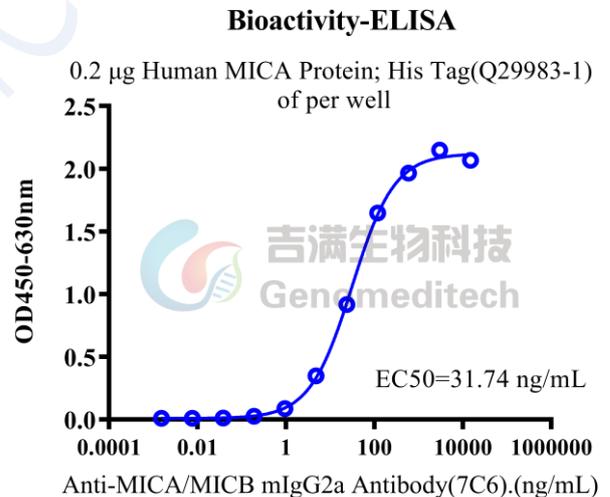


On SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.

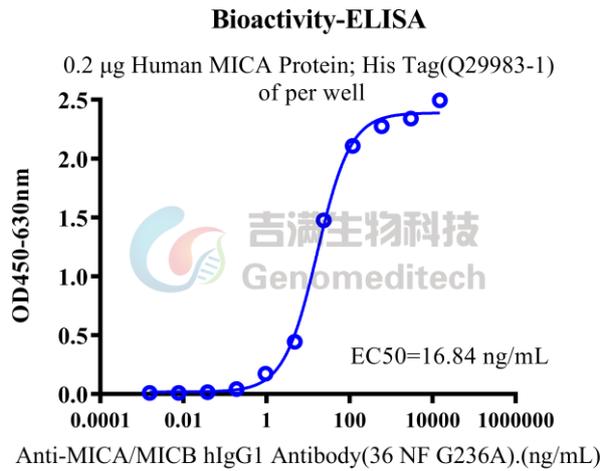
Bioactivity-ELISA



Human MICA Protein; His Tag(Q29983-1) (Catalog # GM-88550RP) was immobilized at 2 $\mu\text{g}/\text{ml}$ (100 $\mu\text{L}/\text{well}$). Increasing concentrations of Anti-MICA/MICB mIgG2a Antibody(PDI-01) (Catalog # GM-52540AB) were added.



Human MICA Protein; His Tag(Q29983-1) (Catalog # GM-88550RP) was immobilized at 2 $\mu\text{g}/\text{ml}$ (100 $\mu\text{L}/\text{well}$). Increasing concentrations of Anti-MICA/MICB mIgG2a Antibody(7C6) (Catalog # GM-51336AB) were added.



Human MICA Protein; His Tag(Q29983-1) (Catalog # GM-88550RP) was immobilized at 2 μ g/ml (100 μ L/well). Increasing concentrations of Anti-MICA/MICB hIgG1 Antibody(36 NF G236A) (Catalog # GM-48843AB) were added.