

Recombinant Human MHC Class I Polypeptide-Related Sequence A, His

#R00522

Size: 10 µg/100 µg/500 µg

Stability & Storage

- Use a manual defrost freezer and avoid repeated freeze-thaw cycles.
- 6 months from date of receipt, -20 to -70 °C as supplied.
 - 3 months, -20 to -70 °C under sterile conditions after opening.



Warning: This product is intended for scientific research only. It is not to be used for medical or diagnostic procedures in humans or animals, nor as a food, cosmetic, or household product.

Background

MIC-A (MHC class I chain-related gene A) is a single-pass type I member protein. It is expressed on the cell surface in gastric epithelium, endothelial cells and fibroblasts and in the cytoplasm in keratinocytes and monocytes. Additionally, MIC-A can be induced by bacterial and viral infections. It shares 85 % amino acid identity with MIC-B and they are distantly related to the MHC class I proteins. Because they possess three extracellular Ig-like domains, but unlike classical MHC class I molecules. They do not form a heterodimer with beta2 microglobulin, but bind as a monomer to a KLRK1/NKG2D that is an activating receptor expressed on NK cells, NKT cells, γδ T cells, and CD8+ αβ T cells. Recognition of MICA by NKG2D results in the activation of cytolytic activity and/or cytokine production by these effector cells. MIC-A recognition plays an important role in tumor surveillance, viral infections, and autoimmune diseases.

AA Sequence

MSYYHHHHHHHDYDIPTTENLYFQGAMDPEFEPHSLR
YNLTVLSWDGGSVQSGFLAEVHLDGQPFLRYDRQKC
RAKPQGQWAEDVLGNKTWDRETRDLTGNGKDLRM
TLAHIKDQKEGLHSLQEIRVCEIHEDNSTRSSQHFFYY
DGELFLSQNLETEEWTPQSSRAQTLAMNVRNFLKE
DAMKTKTHYHAMHADCLQELRRYLESGVVLRRTVPP
MVNVTRSEASEGNITVTCRASSFYPRNIILTWQDGV
SLSHDTQQWGDVLPDGNNGTYQTWVATRICRGEEQR
FTCYMEHSGNHSTHPVPSGKVLVLQSHKLGCFGG

Product Specification

Species	Human
Source	Escherichia coli.
Tags	His
Molecular Weight	Approximately 36.9 kDa, a single non-glycosylated polypeptide chain containing 320 amino acids.
Purity	> 95 % by SDS-PAGE and HPLC analyses.
Biological Activity	Fully biologically active when compared to standard. The specific activity is determined by binding MICA antibody in ELISA.
Physical Appearance	Sterile Colorless liquid.
Formulation	Supplied as a 0.2 µm filtered concentrated sterile solution in PBS, pH 7.4, and 8 M Urea.

Endotoxin	Less than 1 EU/μg of rHuMIC-A, His as determined by LAL method.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
