

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

ChemWhat Technical Data Sheet (TDS)

Catalog Number:	601-01H
Source:	<i>Escherichia coli</i> .
Molecular Weight:	Approximately 36.9 kDa, a single non-glycosylated polypeptide chain containing 320 amino acids.
Quantity:	10µg /50µg /1000µg
AA Sequence:	MSYYHHHHHH DYDIPTTENL YFQGAMDPEF EPHSLRYNLT VLSWDGGSVQS GFLAEVHLDG QPFLRYDRQK CRAKPQQQWA EDVLGNKTWD RETRDLTGNG KDLRMTLAHI KDQKEGLHSL QEIRVCEIHE DNSTRSSQHF YYDGELFLSQ NLETEEWTVP QSSRAQTLAM NVRNFLKEDA MKTKTHYHAM HADCLQELRR YLESGVVLRV TVPPMVNVTR SEASEGNITV TCRASSFYPR NIILTWRQDG VLSHDTQQW GDVLPDGNGT YQTWVATRIC RGEEQRFTCY MEHSGNHSTH PVPSGKVLVL QSHKLGCFGG
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 Filtered White lyophilized (freeze-dried) powder.
Formulation:	Lyophilized from a 0.2 µm filtered concentrated 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.
Reconstitution:	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water to a concentration of 1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C . Further dilutions should be made in appropriate buffered solutions, which contain 8 M Urea.
Shipping:	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage:	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none">● 12 months from date of receipt, -20 to -70 °C as supplied.● 1 month, 2 to 8 °C under sterile conditions after reconstitution.● 3 months, -20 to -70 °C under sterile conditions after reconstitution.
Usage:	ChemWhat Limited in UK offers this branded product for research, development or further evaluation purposes. NOT FOR HUMAN USE.

Human MHC Class I Polypeptide-Related Sequence A

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.