Datasheet

Cat. No. P1605

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

Information

Gene ID	
Accession #	
Alternate Names	
Source	Escherichia coli.
M.Wt	Approximately 36.9 kDa, a single non-glycosylated polypeptide chain containing 320 amino acids.
AA Sequence	MSYYHHHHHH DYDIPTTENL YFQGAMDPEF EPHSLRYNLT VLSWDGSVQS GFLAEVHLDG QPFLRYDRQK CRAKPQGQWA EDVLGNKTWD RETRDLTGNG KDLRMTLAHI KDQKEGLHSL QEIRVCEIHE DNSTRSSQHF YYDGELFLSQ NLETEEWTVP QSSRAQTLAM NVRNFLKEDA MKTKTHYHAM HADCLQELRR YLESGVVLRR TVPPMVNVTR SEASEGNITV TCRASSFYPR NIILTWRQDG VSLSHDTQQW GDVLPDGNGT YQTWVATRIC RGEEQRFTCY MEHSGNHSTH PVPSGKVLVL QSHKLGCFGG
Appearance	Sterile Colorless liquid.
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles Refer to lot specific COA for the Use by Date when stored at ≤ -20 °C as supplied
Formulation	Supplied as a 0.2 μm filtered concentrated sterile solution in PBS, pH 7.4, and 8 M Urea.
Reconstitution	
Biological Activity	Fully biologically active when compared to standard. The specific activity is determined by binding MICA antibody in ELISA.
Shipping Condition	Gel pack.
Handling	Centrifuge the vial prior to opening.
Usage	For Research Use Only! Not to be used in humans.

Components and Storage

Components	10μg	100μg	500μg
Recombinant Human MHC Class I Polypeptide-Related Sequence A, His	10μg	100μg	500μg

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Quality Control

Purity	> 95 % by SDS-PAGE and HPLC analyses.
Endotoxin	Less than 1 EU/μg of rHuMIC-A, His as determined by LAL method.

Description

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, γ δ T cells, and CD8+ α β 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.

Reference

1. Yao Z, Volgger A, Helmberg W, et al. 1999. Eur J Immunogenet, 26: 225-32
2. Li P, Willie ST, Bauer S, et al. 1999. Immunity, 10: 577-84
3. Petersdorf EW, Shuler KB, Longton GM, et al. 1999. Immunogenetics, 49: 605-12
4. Komatsu-Wakui M, Tokunaga K, Ishikawa Y, et al. 1999. Immunogenetics, 49: 620-8
5. Gambelunghe G, Ghaderi M, Cosentino A, et al. 2000. Diabetologia, 43: 507-14.

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