



Human HLA-A, B, C (MHC Class I) Antibody

Purified

Monoclonal Antibody

Product Information

Product No.: H263

Clone: W6/32

RRID: AB_2737521

Isotype: Mouse IgG2a k

Storage: Sterile 2 to 8°C

Product Description

Specificity:

Clone W6/32 recognizes the human MHC class I molecules HLA-A, -B, and -C.

Antigen Distribution:

HLA-A, -B, and -C are ubiquitously expressed on nucleated cells.

Background:

HLA antibody, clone W6/32, recognizes the major histocompatibility complex (MHC) class I molecules human leukocyte antigen (HLA)-A, HLA-B, and HLA-C. MHC class I is ubiquitously expressed on the cell surface of nucleated cells and consists of a 45-kDa type I transmembrane glycoprotein (α -chain or heavy chain) and a 12-kDa soluble protein (β 2-microglobulin, β 2M)^{1,2}. The α -chain consists of three domains (α 1, α 2, and α 3)³. α 1 and α 2 form the closed antigen-binding groove and bind to 8-10 aa peptides derived from cytosolic antigens⁴⁻⁶. β 2M noncovalently associates with α 3, which is essential for MHC stability. MHC class I plays a critical role in the adaptive immune response by presenting endogenous antigens to cytotoxic CD8 T cells. MHC class I molecules can also present exogenous antigens to CD8 T cells via a process known as cross-presentation⁷. The T cell receptor (TCR)/CD3 complex of CD8 T cells interacts with peptide-MHC class I, which induces CD8 T cell activation and subsequent cell-killing. CD8 molecules also bind to MHC class I, which helps augment TCR signaling⁸. In contrast to CD8 T cells, MHC class I is an inhibitory ligand for natural killer (NK) cells, promoting self tolerance⁹. MHC class I also contributes to the positive selection of CD8 T cells and NK cell specificity^{10,11}.

Known Reactivity Species:

Baboon, Chimpanzee, Cynomolgus Monkey, Feline, Bovine, Human

Format:

in vivo GOLD™, Purified in vivo Functional Grade

Immunogen:

Human tonsil cell membrane

Formulation

This monoclonal antibody is aseptically packaged and formulated in 0.01 M phosphate buffered saline (150 mM NaCl) PBS pH 7.2 - 7.4 with no carrier protein, potassium, calcium or preservatives added. Due to inherent biochemical properties of antibodies, certain products may be prone to precipitation over time. Precipitation may be removed by aseptic centrifugation and/or filtration.

Purity

≥95% monomer by analytical SEC, >95% by SDS Page

Endotoxin

< 1.0 EU/mg as determined by the LAL method

Storage and Stability

Functional grade preclinical antibodies may be stored sterile as received at 2°C to 8°C for up to one month. For longer term storage, aseptically aliquot in working volumes without diluting and store at ≤ -70°C.

Avoid Repeated Freeze Thaw Cycles.

Product Preparation

Functional grade preclinical antibodies are manufactured in an animal free facility using in vitro cell culture techniques and are purified by a multi-step process including the use of protein A or G to assure extremely low levels of endotoxins, leachable protein A or aggregates.

Applications

Applications and Recommended Usage (Quality Tested By Leinco):

FC The suggested concentration for this HLA-A,B,C Clone W6/32 antibody for staining cells in flow cytometry is ≤ 2.0 µg per 10⁶ cells in a volume of 100 µl or 100µl of whole blood. Titration of the reagent is recommended for optimal performance for each application.

WB The suggested concentration for use in western blotting is 1-10 µg/ml.

Other Applications Reported in Literature:

B

CODEX®

IHC FF

IP

Country of Origin

USA

References

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- 6) Zacharias M & Springer S. (2004) Biophys J. 87:2203-14.10.1529/biophysj.104.044743
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- 10) Raulet DH. (1994) Adv Immunol. 55:381-421
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