

# CD8A (Cytotoxic / Suppressor T-Cell Marker) Antibody - With BSA and Azide

Mouse Monoclonal Antibody [Clone RIV11] Catalog # AH12639

#### **Product Information**

ApplicationIF, FCPrimary AccessionP01732Other Accession925, 85258ReactivityHumanHostMouseClonalityMonoclonal

**Isotype** Mouse / IgG1, kappa

Clone Names RIV11
Calculated MW 25729

## **Additional Information**

Gene ID 925

Other Names T-cell surface glycoprotein CD8 alpha chain, T-lymphocyte differentiation

antigen T8/Leu-2, CD8a, CD8A, MAL

**Application Note** IF~~1:50~200 FC~~1:10~50

**Storage** Store at 2 to 8°C.Antibody is stable for 24 months.

Precautions CD8A (Cytotoxic / Suppressor T-Cell Marker) Antibody - With BSA and Azide

is for research use only and not for use in diagnostic or therapeutic

procedures.

### **Protein Information**

Name CD8A

**Synonyms** MAL

**Function** Integral membrane glycoprotein that plays an essential role in the immune

response and serves multiple functions in responses against both external and internal offenses. In T-cells, functions primarily as a coreceptor for MHC class I molecule:peptide complex. The antigens presented by class I peptides are derived from cytosolic proteins while class II derived from extracellular proteins. Interacts simultaneously with the T-cell receptor (TCR) and the MHC class I proteins presented by antigen presenting cells (APCs). In turn, recruits the Src kinase LCK to the vicinity of the TCR-CD3 complex. LCK then initiates different intracellular signaling pathways by phosphorylating various

substrates ultimately leading to lymphokine production, motility, adhesion and activation of cytotoxic T- lymphocytes (CTLs). This mechanism enables CTLs to recognize and eliminate infected cells and tumor cells. In NK-cells, the presence of CD8A homodimers at the cell surface provides a survival mechanism allowing conjugation and lysis of multiple target cells. CD8A homodimer molecules also promote the survival and differentiation of activated lymphocytes into memory CD8 T-cells.

**Cellular Location** [Isoform 1]: Cell membrane; Single-pass type I membrane protein Note=CD8A

localizes to lipid rafts only when associated with its partner CD8B.

**Tissue Location** CD8 on thymus-derived T-cells usually consists of a disulfide-linked

alpha/CD8A and a beta/CD8B chain. Less frequently, CD8 can be expressed as

a CD8A homodimer. A subset of natural killer cells, memory T-cells,

intraepithelial lymphocytes, monocytes and dendritic cells expresses CD8A homodimers. Expressed at the cell surface of plasmacytoid dendritic cells

upon herpes simplex virus-1 stimulation

# **Background**

Recognizes a protein of 32kDa, identified as CD8a (also known as CD8 chain, T cell co-receptor, Leu2, and T8). CD8 molecule consists of two chains, termed and chain, which are expressed as a disulphide-linked heterodimer or as an homodimer. CD8 is expressed on T cell subset (cytotoxic/suppressor T cells), thymocytes and NK cells. The majority of CD8+ T-cells expresses CD8 as heterodimer. Some subpopulation of CD8+ T cells as well as NK cells may express homodimer. CD8 functions as a co-receptor in concert with TCR for binding the MHC class I/peptide complex. The HIV-2 envelope glycoprotein binds CD8 chain (but not chain). The cytoplasmic domain of CD8 associates with p56lck tyrosine kinase.

#### References

Knapp W. et. al. Leukocyte Typing IV, p342-343, Oxford University Press, 1989 | Parnes JR, CD4 and CD8 in T cell lineage commitment: alterations induced by expression of a CD8/CD4 chimeric transgene. Semin Immunol 1994, 6:221-229. | Delon J. et al. CD8 expression allows T cell signaling by monomeric peptide-MHC complexes. Immunity 1998, 9(4):467-73 | Akimoto H, et al. Binding of HIV-2 envelope glycoprotein to CD8 molecules and related chemokine production. Immunology 1998, 95(2):214-218 | Leahy DJ. A structural view of CD4 and CD8. FASEB J. 1995,9(1):17-25. | Jonker M et al. Side effects and immunogenicity of murine lymphocyte-specific monoclonal antibodies in subhuman primates. Transplantation 1988, 45(4):677-682

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