

Anti-mouse CD8b Antibody

Catalog Number:	204701, 204702
Size:	100 μg, 500 μg
Target Name:	CD8b, Lyt-3, Ly-3
Regulatory Status:	RUO

PRODUCT DETAILS

Clone:	YTS156.7.7
Application:	Flow Cytometry, IHC-F
Reactivity:	Mouse
Format:	Purified
Isotype:	Rat IgG2b
Antibody Type:	Monoclonal
Formulation:	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide
Protein Concentration:	0.5 mg/mL
Storage&Handling:	The antibody solution should be stored between 2°C and 8°C
Isotype Control:	303601

BACKGROUND INFORMATION

Mouse CD8 β (CD8b) is a glycoprotein expressed primarily on cytotoxic T lymphocytes, where it forms a heterodimer with CD8 α to create the CD8 co-receptor complex. This complex plays a crucial role in T-cell receptor (TCR) signaling by binding to major histocompatibility complex class I (MHC I) molecules on antigen-presenting cells. CD8 β enhances the sensitivity and specificity of antigen recognition, supporting effective cytotoxic responses against infected or malignant cells.

Structurally, CD8 β is a type I transmembrane protein with an extracellular immunoglobulin-like domain, a single transmembrane region, and a short cytoplasmic tail. It pairs with CD8 α through disulfide bonding to form the CD8 $\alpha\beta$ heterodimer, which is the predominant form on conventional T cells. The cytoplasmic domain contributes to signaling by associating indirectly with intracellular kinases such as Lck via CD8 α .

The primary ligand for the CD8 $\alpha\beta$ complex is MHC class I, which presents peptide antigens to CD8+ T cells. CD8 β itself contributes to stabilizing this interaction and optimizing TCR engagement rather than independently binding ligands.

In disease models, CD8 β -expressing T cells are central to antiviral and anti-tumor immunity but can also contribute to immunopathology and autoimmunity when dysregulated. Therapeutically, CD8 β is not directly targeted but is important in T-cell-based immunotherapies, including adoptive T-cell transfer and vaccine strategies, where robust CD8+ T-cell responses are desired.