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InnoCyto Inc.

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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 CD8β (CD8b) is a glycoprotein expressed primarily on cytotoxic T lymphocytes, where it forms a heterodimer with CD8α 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. CD8β enhances the sensitivity and specificity of antigen recognition, supporting effective cytotoxic responses against infected or malignant cells.

Structurally, CD8β is a type I transmembrane protein with an extracellular immunoglobulin-like domain, a single transmembrane region, and a short cytoplasmic tail. It pairs with CD8α through disulfide bonding to form the CD8αβ 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 CD8α.

The primary ligand for the CD8αβ complex is MHC class I, which presents peptide antigens to CD8+ T cells. CD8β itself contributes to stabilizing this interaction and optimizing TCR engagement rather than independently binding ligands.

In disease models, CD8β-expressing T cells are central to antiviral and anti-tumor immunity but can also contribute to immunopathology and autoimmunity when dysregulated. Therapeutically, CD8β 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.