Product Information

Anti-CD3 ζ Chain Antibody, Mouse Monoclonal

Clone ZT-10, Purified from Hybridoma Cell Culture

SAB4200446

Product Description

Anti-CD3 ζ chain (mouse IgG2b isotype) is derived from the hybridoma ZT-10 produced by the fusion of mouse myeloma cells and splenocytes from BALB/c mice immunized with a synthetic peptide corresponding to a fragment of mouse CD3 ζ chain (GeneID: 12503), conjugated to KLH. The isotype is determined by ELISA using Mouse Monoclonal Antibody Isotyping Reagents (Cat. No. ISO2). The antibody is purified from culture supernatant of hybridoma cells grown in a bioreactor.

Anti-CD3 ζ chain recognizes human and mouse CD3 ζ chain. The antibody epitope resides within the first ITAM signaling motif of CD3 ζ chain. The product may be used in several immunochemical techniques including immunocytochemistry and flow cytometry.

The T-cell receptor (TCR) functions in both antigen recognition and signal transduction, which are crucial initial steps of antigen-specific immune responses. TCR integrity is vital for the induction of optimal and efficient immune responses, including the routine elimination of invading pathogens and the elimination of modified cells and molecules. Of the TCR subunits, the ζ-chain has a key role in receptor assembly, expression, and signaling. Downregulation of TCR ζ-chain expression and impairment of T cell function have been shown for T cells isolated from hosts with various chronic pathologies, including cancer, and autoimmune and infectious diseases.[1] Studies have demonstrated altered expression and function of this signal transduction molecule in T cells from patients with hematological diseases.[2]

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody Concentration: ~ 1.0 mg/mL

Precautions and Disclaimer

For research use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For extended storage, freeze at −20 °C in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Flow Cytometry

A working concentration of 1.5-3 µg/test is recommended using Jurkat cells.

Immunofluorescence

A working concentration of 2.5-5.0 µg/mL is recommended using Jurkat cells.

Note: In order to obtain best results in various techniques and preparations, it is recommended to determine optimal working dilutions by titration.

References

1. Banyiash, M., *Nature Rev. Immunol.,* **4**: 675-687 (2004).
2. Li, Y., *Hematology,* **13**: 267-275 (2008).

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