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ProductInformation

Monoclonal Anti-ZAP-70
Clone 1E7.2
Purified Mouse Immunoglobulin

Product Code **Z 0627**

Product Description

Monoclonal Anti-ZAP-70 (mouse IgG1 isotype) is derived from the hybridoma 1E7.2 produced by the fusion of mouse myeloma cells and splenocytes from mice immunized with a peptide corresponding to amino acids 282-307 of human ZAP-70 conjugated to KLH.[1] The isotype is determined using a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents (Product Code ISO-2).

Monoclonal Anti-ZAP-70 recognizes human[1,2] and mouse[1] ZAP-70 (approx. 70 kDa). The product is useful in ELISA, immunoblotting,[1] flow-cytometry,[2] immunoprecipitation[1] and immunocytochemistry.

ZAP-70 is a protein tyrosine kinase of the Syk family that is localized exclusively to the cytosol of T cells and natural killer cells. It is required for T cell activation.[3] ZAP-70 is activated by Lck-mediated phosphorylation of its tyrosine residues.[4] Mutant T cell lines have been used as model systems for elucidating the functional characterization of ZAP-70 in T cell antigen receptor signaling pathways and in studying the attenuation or enhancement of function resulting from phosphorylation of its tyrosine residues.[5-6] ZAP-70 has been used to map the phosphorylation sites on LAT (linker for activation of T cells) to determine how phosphorylation is involved in the activation of signaling proteins in T cells.[7] Mutation of the gene that creates a defective ZAP-70 results in severe combined immunodeficiency syndrome.[8] Differences in the regulation of Syk and ZAP-70 suggest that each has a distinct role in immunoreceptor signaling.[9]

Reagent

The antibody is supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody Concentration: approx. 1.5 mg/ml.

Precautions and Disclaimer

Due to the sodium azide content a material safety sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazardous and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. 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

A working concentration of 0.5-1.0 µg/ml is determined by immunoblotting, using Jurkat cells extract.

Note: In order to obtain best results in different techniques and preparations we recommend determining optimal working concentration by titration test.

References

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