

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human ZAP70 in Western blots.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human ZAP70 Phe10-Cys102 Accession # P43403
Conjugate	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide
*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.	

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunohistochemistry	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

ZAP70 (Zeta-associated protein 70 kDa; also Syk-related tyrosine kinase) is a 68-70 kDa member of the SYK subfamily, tyrosine kinase family of molecules. It is found in immature thymocytes, plus T cells and NK cells, and is essential for TCR-mediated IL-2 production, plus the development of CD8+ T cells. Human ZAP70 is 619 amino acids (aa) in length. It contains two SH2 domains (aa 10-102 and 162-254), a regulatory interdomain region (aa 255-337), and a C-terminal tyrosine kinase domain (aa 338-539). The two SH2 domains bind to phosphorylated tyrosines on the CD3 ζ-chain following TCR activation. This activates the ZAP70 kinase domain with the initiation of downstream signaling via SLP76 and LAT. There are four potential splice variants of ZAP70. One termed TZK is 37 kDa in size, and characterized by an alternative start site at Met308. This is expressed in very early thymocytes. Two others show an alternative start site 88 aa upstream of the standard site, with one of these variants also showing a deletion of aa 495-541. A fourth variant contains an eight aa substitution for aa 1-134. Over aa 10-102, human ZAP70 shares 98% aa identity with mouse ZAP70.

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