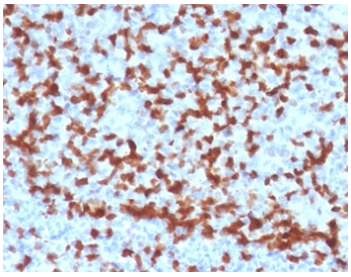
ZAP70 Antibody [clone ZPT70-2] (V3898)

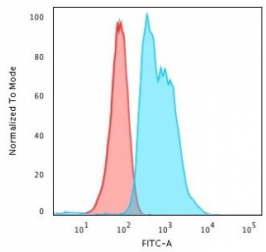
Catalog No.	Formulation	Size
V3898-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V3898-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V3898SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	ZPT70-2
Purity	Protein G affinity chromatography
UniProt	P43403
Localization	Cytoplasmic, cell surface
Applications	Flow Cytometry : 1-2ug/10^6 cells Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT
Limitations	This ZAP70 antibody is available for research use only.



IHC testing of FFPE human tonsil with ZAP70 antibody (clone ZPT70-2). HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 10-20 min followed by cooling at RT for 20 min.



Flow testing of PFA-fixed Jurkat cells with ZAP70 antibody (clone ZPT70-2); Red=isotype control, Blue= ZAP70 antibody.

Description

Tyrosine-protein kinase ZAP70 is a tyrosine kinase that plays an essential role in regulation of the adaptive immune response. Regulates motility, adhesion and cytokine expression of mature T-cells, as well as thymocyte development. Contributes also to the development and activation of primary B-lymphocytes. When antigen presenting cells (APC) activate T-cell receptor (TCR), a serie of phosphorylations lead to the recruitment of ZAP70 to the doubly phosphorylated TCR component CD247/CD3Z through ITAM motif at the plasma membrane. This recruitment serves to localization to the stimulated TCR and to relieve its autoinhibited conformation. Release of ZAP70 active conformation is further stabilized by phosphorylation mediated by LCK. Subsequently, it phosphorylates at least 2 essential adapter proteins: LAT and LCP2. In turn, a large number of signaling molecules are recruited and ultimately lead to lymphokine production, T-cell proliferation and differentiation. Furthermore, ZAP70 controls cytoskeleton modifications, adhesion and mobility of T-lymphocytes, thus ensuring correct delivery of effectors to the APC. [UniProt]

Application Notes

The stated application concentrations are suggested starting points. Titration of the ZAP70 antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A portion of amino acids 247-382 from the human protein was used as the immunogen for the ZAP70 antibody.

Storage

Store the ZAP70 antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).