anti-p-εY1

rabbit polyclonal serum
It recognizes the first tyrosine of CD3ε when phosphorylated.

#PA011 100 µl

This product is for in vitro research use only and is not intended for use in animals or humans.

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applications	species cross reactivity.	source	isotype	MW of the antigen
WB, IP	mouse, human	rabbit	polyclonal	20-22 kDa

storage : supplied in 50% glycerol and less than 0.02% sodium azide;
store at -20°C.

recommended use:
Western Blotting 1:1000
Immunoprecipitation 5 µl

Background:

The T cell antigen receptor (TCR) plays a crucial role in adaptive immune responses by activating T cells upon encountering a pathogenic peptide presented by MHC molecules.
The TCR consists of the TCRαβ, CD3εγ, CD3εδ and CD3ζζ dimers. TCRαβ (or TCRγδ) bind to the antigen, whereas CD3 transmits the signal into the cell.
CD3ε plays a central role, since it contains a proline-rich sequence (PRS) in addition to two tyrosines and since it undergoes a conformational change upon TCR triggering.
The two CD3ε tyrosines are phosphorylated upon pathogen recognition and are part of an ITAM motif (blue). The N-terminal tyrosine, named εY1 (bold), is part of the PRS (underlined):

ERPPPVPNPD**Y**EPIRKGQRDLYSGLN

We have generated a specific antiserum (anti-p-εY1) that recognizes εY1 only when phosphorylated. It slight recognizes phosphorylated CD3ζ and not any other (phospho)-tyrosines of the TCR (see figure).

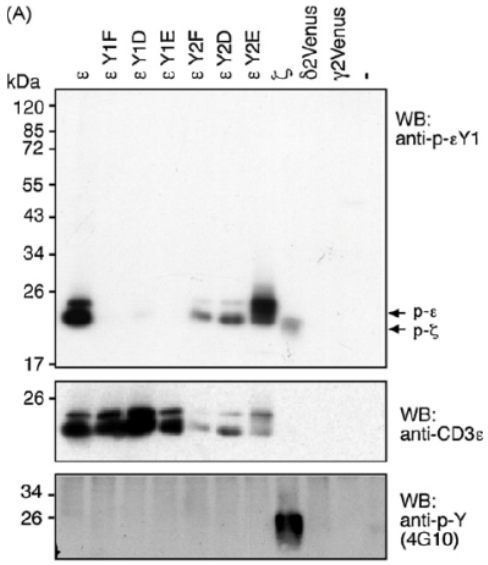

Figure: Anti-p-εY1 recognizes phospho-εY1. *Drosophila* S2 cells were transfected with plasmids encoding for the proteins indicated as well as kinases, in order to phosphorylate the CD3 chains. WB was done using the total cell lysates.

Publications:

Dopfer et al. Immunol. Lett 2010, 130: 43-50

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