Revision 3

Store at -20C

#25361

SLP-76 (E4N7E) Rabbit mAb

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP, IHC-P	H M	Endogenous	76	Rabbit IgG	#Q60787	16822

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:200
Immunohistochemistry (Paraffin)	1:50 - 1:200

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

For a carrier-free (BSA and azide free) version of this product see product #97096.

Specificity/Sensitivity

SLP-76 (E4N7E) Rabbit mAb recognizes endogenous levels of total SLP-76 protein.

This antibody recognizes mouse SLP-76 protein and is also reactive with human SLP-76; however, this antibody is not suggested for immunohistochemical analysis of human tissues. Instead, SLP-76 (D1R1A) Rabbit mAb #70896 is recommended for IHC analysis of human tissue samples. Non-specific staining was observed in mouse testis by immunohistochemistry.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Pro241 of mouse SLP-76 protein.

Background

SH2 domain-containing leukocyte protein of 76 kDa (SLP-76) is a hematopoietic adaptor protein that is important in multiple biochemical signaling pathways and necessary for T cell development and activation (1). ZAP-70 phosphorylates SLP-76 and LAT as a result of TCR ligation. SLP-76 has amino-terminal tyrosine residues followed by a proline-rich domain and a carboxy-terminal SH2 domain. Phosphorylation of Tyr113 and Tyr128 result in recruitment of the GEF Vav and the adaptor protein Nck (2). TCR ligation also leads to phosphorylation of Tyr145, which mediates an association between SLP-76 and Itk, which is accomplished in part via the proline-rich domain of SLP-76 and the SH3 domain of Itk (3). Furthermore, the proline-rich domain of SLP-76 binds to the SH3 domains of Grb2-like adaptor Gads (3,4). In resting cells, SLP-76 is predominantly in the cytosol. Upon TCR ligation, SLP-76 translocates to the plasma membrane and promotes the assembly of a multi-protein signaling complex that includes Vav, Nck, Itk, and PLCγ1 (1). The expression of SLP-76 is tightly regulated; the protein is detected at very early stages of thymocyte development, increases as thymocyte maturation progresses, and is reduced as cells mature to $CD4^+$ $CD8^+$ double-positive thymocytes (5).

Background References

1. Clements, J.L. (2003) *Immunol Rev* 191, 211-9.
2. Bubeck Wardenburg, J. et al. (1998) *Immunity* 9, 607-16.
3. Bunnell, S.C. et al. (2000) *J Biol Chem* 275, 2219-30.
4. Liu, S.K. et al. (1999) *Curr Biol* 9, 67-75.
5. Clements, J.L. et al. (1998) *J Immunol* 161, 3880-9.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation **IHC-P:** Immunohistochemistry (Paraffin)

Cross-Reactivity Key

H: Human **M:** Mouse

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