

#4482 Store at -20C

**THEMIS Antibody**

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**For Research Use Only. Not for Use in Diagnostic Procedures.**

<b>Applications:</b> W	<b>Reactivity:</b> H	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 74	<b>Source/Isotype:</b> Rabbit	<b>UniProt ID:</b> #Q8N1K5	<b>Entrez-Gene Id:</b> 387357
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<b>Product Usage Information</b>	<b>Application</b> Western Blotting	<b>Dilution</b> 1:1000
<b>Storage</b>	Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.	
<b>Specificity/Sensitivity</b>	THEMIS Antibody recognizes endogenous levels of total THEMIS protein.	
<b>Source / Purification</b>	Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human THEMIS protein. Antibodies are purified by protein A and peptide affinity chromatography.	
<b>Background</b>	THEMIS is a recently identified protein found to be critical for T cell development (1-5). It contains two amino-terminal globular domains, a nuclear localization signal, and a carboxy-terminal proline-rich sequence with homology to SH3 binding domains (2,3). THEMIS is detected in both the cytoplasm and the nucleus (2). It is expressed at low levels in mature T cells and during thymocyte development, with expression peaking in CD4 <sup>+</sup> CD8 <sup>+</sup> double positive cells (1-5). THEMIS is tyrosine phosphorylated downstream of TCR signaling and associates with the adaptor GRB2 and possibly other SH3 domain-containing proximal TCR signaling molecules (1-5). Mice lacking THEMIS have a defect in positive selection that results in decreased numbers of both single positive thymocytes and mature T cells (1-5).	
<b>Background References</b>	<ol style="list-style-type: none"> <li>1. Johnson, A.L. et al. (2009) <i>Nat Immunol</i> 10, 831-9.</li> <li>2. Lesourne, R. et al. (2009) <i>Nat Immunol</i> 10, 840-7.</li> <li>3. Fu, G. et al. (2009) <i>Nat Immunol</i> 10, 848-56.</li> <li>4. Kakugawa, K. et al. (2009) <i>Mol Cell Biol</i> 29, 5128-35.</li> <li>5. Patrick, M.S. et al. (2009) <i>Proc Natl Acad Sci U S A</i> 106, 16345-50.</li> </ol>	

<b>Species Reactivity</b>	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
<b>Western Blot Buffer</b>	<b>IMPORTANT:</b> 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.
<b>Applications Key</b>	<b>W:</b> Western Blotting
<b>Cross-Reactivity Key</b>	<b>H:</b> Human
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