

## DESCRIPTION

|                           |                                                                                                                                                                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Mouse/Rat                                                                                                                                                                                                                                                                   |
| <b>Specificity</b>        | Detects mouse Themis in direct ELISAs and mouse and rat Themis in Western blots. In direct ELISAs, approximately 50% cross-reactivity with recombinant human Themis is observed.                                                                                            |
| <b>Source</b>             | Polyclonal Sheep IgG                                                                                                                                                                                                                                                        |
| <b>Purification</b>       | Antigen Affinity-purified                                                                                                                                                                                                                                                   |
| <b>Immunogen</b>          | <i>E. coli</i> -derived recombinant mouse Themis<br>Lys122-Lys237<br>Accession # Q8BGW0                                                                                                                                                                                     |
| <b>Conjugate</b>          | Alexa Fluor 532<br>Excitation Wavelength: 534 nm<br>Emission Wavelength: 553 nm                                                                                                                                                                                             |
| <b>Formulation</b>        | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide<br><br>*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.

## 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

Themis (**T**Hymus-Expressed **M**olecule Involved in **S**election; also C6orf190, Gasp and Thylex) is a 72-74 kDa member of the Themis family of proteins. It has restricted expression, being found in double negative #2-4 thymocytes, double positive thymocytes, and CD4<sup>+</sup> plus CD8<sup>+</sup> thymocytes and T cells. The molecule is known to constitute part of the TCR signalosome, along with LAT, Grb2 and PLCγ1, and is required for ERK and AP-1 activation. Themis appears to contribute to the process of positive selection. In particular, it is needed to prevent cell death during the selection process. Mouse Themis is 636 amino acids (aa) in length. It contains two globular CABIT (Cys-containing, all-beta in Themis) domains (aa 1-260 and 261-520) plus an NLS (aa 555-563). There are four isoform variants. One shows a 25 aa substitution for aa 238-636, a second possesses an alternative start site at Met90 coupled to a 13 aa substitution for aa 589-636, while third and fourth variants contain 7 aa and 17 aa substitutions for aa 589-636. Over aa 122-237, mouse Themis shares 96% and 87% aa identity with rat and human Themis, respectively.

## PRODUCT SPECIFIC NOTICES

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