

## DESCRIPTION

|                           |                                                                                                                                                                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Rat                                                                                                                                                                                                                                                                         |
| <b>Specificity</b>        | Detects rat Fas/TNFRSF6/CD95 in direct ELISAs and Western blots. In direct ELISAs, less than 5% cross-reactivity with recombinant human Fas, recombinant mouse Fas, and recombinant feline Fas is observed.                                                                 |
| <b>Source</b>             | Polyclonal Goat IgG                                                                                                                                                                                                                                                         |
| <b>Purification</b>       | Antigen Affinity-purified                                                                                                                                                                                                                                                   |
| <b>Immunogen</b>          | Mouse myeloma cell line NS0-derived recombinant rat Fas/TNFRSF6/CD95<br>Gln22-Lys170<br>Accession # NP_631933                                                                                                                                                               |
| <b>Conjugate</b>          | Alexa Fluor 405<br>Excitation Wavelength: 405 nm<br>Emission Wavelength: 421 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.

|                             |                                                                        |
|-----------------------------|------------------------------------------------------------------------|
| <b>CyTOF-ready</b>          | Optimal dilution of this antibody should be experimentally determined. |
| <b>Western Blot</b>         | Optimal dilution of this antibody should be experimentally determined. |
| <b>Flow Cytometry</b>       | Optimal dilution of this antibody should be experimentally determined. |
| <b>Immunohistochemistry</b> | Optimal dilution of this antibody should be experimentally determined. |

## PREPARATION AND STORAGE

|                                |                                                                                                                   |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Shipping</b>                | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| <b>Stability &amp; Storage</b> | Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied                          |

## BACKGROUND

Fas, also known as APO-1, CD95, and TNFRSF6, belongs to the death receptor family, which is a subfamily of the TNF receptor superfamily (1). Death receptors contain a cytoplasmic death domain (DD), which is required for transducing apoptotic signals. Engagement of Fas by its ligand (FasL) or agonistic anti-Fas antibodies induces dimerization and oligomerization of preformed Fas trimers. The activated receptor recruits the adaptor molecule FADD to form the Death-Inducing Signaling Complex (DISC) that also contains caspases. Upon activation, the caspases initiate a signaling cascade that induces the characteristic apoptotic phenotypes (2). Fas is highly expressed in epithelial cells, hepatocytes, activated mature lymphocytes, virus-transformed lymphocytes and other tumor cells. Fas expression has also been detected in mouse thymus, liver, heart, lung, kidney and ovary. FasL is a member of the TNF family of type 2 membrane proteins. FasL is predominantly expressed by activated T-lymphocytes, NK cells, and in tissues with immune-privileged sites (3).

Fas plays a role in the down-regulation of the immune reaction and has been shown to be an essential mediator of activation-induced death of activated T lymphocytes. Fas-mediated cell death has also been shown to be important for the deletion of activated or autoreactive B-lymphocytes. Both human and mice with genetic defects in Fas accumulate abnormal lymphocytes and develop systemic autoimmunity (4). Besides the perforin/granzyme-based mechanism, the Fas-FasL system has been identified as the alternate pathway for CTL-mediated cytotoxicity (5). FasL has also been shown to function in immunological privileged sites by killing infiltrating Fas-bearing lymphocytes and inflammatory cells (6). Rat Fas cDNA encodes a 324 amino acid residue type 1 membrane protein. The extracellular domain of rat Fas shares 54.1% and 66.7% amino acid sequence identity with that of human and mouse Fas, respectively.

## PRODUCT SPECIFIC NOTICES

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