Rat Fas/TNFRSF6/CD95 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF2159

DESCRIPTION

Species Reactivity	Rat
Specificity	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.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant rat Fas/TNFRSF6/CD95 Gln22-Lys170 Accession # NP_631933
Endotoxin Level	<0.10 EU per 1 µg of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

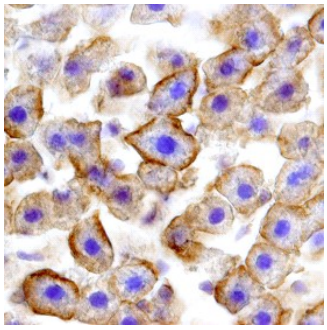
APPLICATIONS

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.*

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	Recombinant Rat Fas/TNFRSF6/CD95 Fc Chimera (Catalog # 2159-FA)
Flow Cytometry	2.5 µg/10^6 cells	Rat splenocytes
Immunohistochemistry	5-15 µg/mL	See Below
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

DATA

Immunohistochemistry



Fas/TNFRSF6/CD95 in Rat Liver. Fas/TNFRSF6/CD95 was detected in perfusion fixed frozen sections of rat liver using Goat Anti-Rat Fas/TNFRSF6/CD95 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF2159) at 15 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Specific staining was localized to hepatocyte cell membranes. View our protocol for Chromogenic IHC Staining of Frozen Tissue Sections.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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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.

References:

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2. Thorburn, S. (2003) Cellular Signaling **16**:139.
3. Green, D.R. and C.F. Ware (1997) Proc. Natl. Acad. Sci. USA **94**:5986.
4. Siegel, R.M. *et al.* (2003) Immunol. Res. **27**:499.
5. Barry, M. *et al.* (2000) Mol. Cell Biol. **20**:3781.
6. Barreiro, R. *et al.* (2004) J. Immunol. **173**:1519.

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