Mouse uPAR Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF534

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse uPAR in direct ELISAs and Western blots.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse uPAR isoform 1 Leu24-Thr297 Accession # Q545X5
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.

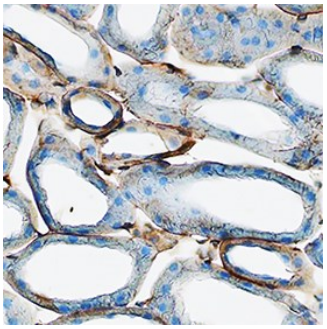
APPLICATIONS

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 Mouse uPAR Fc Chimera (Catalog # 531-PA)
Flow Cytometry	0.25 µg/10^6 cells	RAW 264.7 mouse monocyte/macrophage cell line
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.	
Blockade of Receptor-ligand Interaction	In a functional ELISA, 0.8-4 µg/mL of this antibody will block 50% of the binding of 50 ng/mL of Recombinant Human u-Plasminogen Activator/Urokinase (Catalog # 1310-SE) to immobilized Recombinant Mouse uPAR Fc Chimera (Catalog # 531-PA) coated at 5 µg/mL (100 µL/well). At 25 µg/mL, this antibody will block >90% of the binding.	

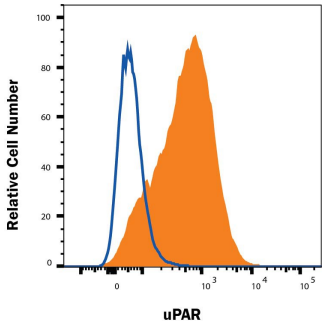
DATA

Immunohistochemistry



uPAR in Mouse Kidney. uPAR was detected in perfusion fixed frozen sections of mouse kidney using Goat Anti-Mouse uPAR Antigen Affinity-purified Polyclonal Antibody (Catalog # AF534) at 3 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 plasma membrane in epithelial cells. View our protocol for Chromogenic IHC Staining of Frozen Tissue Sections.

Flow Cytometry



Detection of uPAR in Raw264.7 cells by Flow Cytometry. Raw264.7 cells were stained with Goat Anti-Mouse uPAR Antigen Affinity-purified Polyclonal Antibody (Catalog # AF534, filled histogram) or isotype control antibody (Catalog # AB-108-C, open histogram), followed by Phycoerythrin-conjugated Anti-Goat IgG Secondary Antibody (Catalog # F0107). View our protocol for Staining Membrane-associated Proteins.

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

The urokinase-type plasminogen activator (uPA) is one of two activators that converts the extracellular zymogen plasminogen to plasmin, a serine protease that is involved in a variety of normal and pathological processes that require cell migration and/or tissue destruction. uPA is synthesized and released from cells as a single-chain (sc) pro-enzyme with limited enzymatic activity and is converted to an active two-chain (tc) disulfide-linked active enzyme by plasmin and other specific proteinases. Both the scuPA and tcuPA bind with high-affinity to the cell surface via the glycosyl phosphatidylinositol-linked receptor uPAR which serves to localize the uPA proteolytic activity. The enzymatic activity of scuPA has also been shown to be enhanced by binding to uPAR. Independent of their proteolytic activity, the uPA/uPAR interaction also initiates signal transduction responses resulting in activation of protein tyrosine kinases, gene expression, cell adhesion, and chemotaxis. uPAR can interact with integrins to suppress normal integrin adhesive function and promote adhesion to vitronectin through a high affinity vitronectin binding site on uPAR. Mouse uPAR-1/Fc cDNA encodes a 327 amino acid (aa) residue precursor protein with a 23 aa residue signal peptide, seven potential N-linked glycosylation sites and a C-terminal GPI-anchor site. An alternate spliced variant of uPAR encoding a secreted soluble form of uPAR also exists. Human and mouse uPAR share approximately 60% aa sequence identity and the receptor-ligand interaction is highly species-specific. Human uPA binds rmuPAR at a lower affinity compared to rhuPAR.

References:

1. Dear, A.E. and R.L. Medcalf (1998) Eur. J. Biochemistry **252:**185.

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