Species Reactivity: Human
Specificity: Detects human uPAR in direct ELISAs and Western blots. In direct ELISAs, less than 1% cross-reactivity with recombinant mouse uPAR is observed.

Source: Polyclonal Goat IgG
Purification: Antigen Affinity-purified
Immunogen: Mouse myeloma cell line NS0-derived recombinant human uPAR Leu23-Arg303
Accession # Q03405

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.

<table>
<thead>
<tr>
<th>Recommended Concentration</th>
<th>Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Western Blot</td>
<td>1 μg/mL See Below</td>
</tr>
<tr>
<td>Immunoprecipitation</td>
<td>1 μg/10^6 cells</td>
</tr>
<tr>
<td>Immunohistochemistry</td>
<td>U937 human histiocytic lymphoma cell line, see our available Western blot detection antibodies</td>
</tr>
</tbody>
</table>

Blockade of Receptor-ligand Interaction
In a functional ELISA, 1-5 μg/mL of this antibody will block 50% of the binding of 10 ng/mL of Recombinant Human u-Plasminogen Activator/Urokinase (Catalog # 1310-SE) to immobilized Recombinant Human uPAR (Catalog # 807-UK) coated at 5 μg/mL (100 μL/well). At 30 μg/mL, this antibody will block >90% of the binding.

DATA

Detection of Human uPAR by Western Blot. Western blot shows lysates of A431 human epithelial carcinoma cell line and Saos-2 human osteosarcoma cell line. PVDF membrane was probed with 1 μg/mL of Goat Anti-Human uPAR Antigen Affinity-purified Polyclonal Antibody (Catalog # AF807) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF017). Specific bands were detected for uPAR at approximately 30-60 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunohistochemistry
uPAR in Human Lung Cancer Tissue. uPAR was detected in immersion fixed paraffin-embedded sections of human lung cancer tissue using Goat Anti-Human uPAR Antigen Affinity-purified Polyclonal Antibody (Catalog # AF807) at 1 μg/mL for 1 hour at room temperature followed by incubation with the Anti-Goat IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC004). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to cell membranes and cytoplasm. View our protocol for IHC Staining with VisUCyte HRP Polymer Detection Reagents.

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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The urokinase-type Plasminogen Activator (uPA) is one of two activators that convert 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. uPAR cDNA encodes a 335 amino acid (aa) residue precursor protein with a 22 aa residue signal peptide, five 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 strictly species-specific.

References: