DESCRIPTION
Species Reactivity Human
Specificity Detects human u-Plasminogen Activator (uPA)/Urokinase Catalytic Domain in direct ELISAs and Western blots. In Western blots under reducing conditions, it reacts with the catalytic domain (B chain) only. In Western blots under non-reducing conditions, it reacts with the B chain and disulfide bond-linked B and A chains. In direct ELISAs, no cross-reactivity with recombinant human (rh) Factor X, rhHGFA, rhKLK-3, -4, -5, -6, -8, -10, -11, rhThrombin, or recombinant mouse WIF-1 is observed.

Source Monoclonal Mouse IgG2a Clone # 204212
Purification Protein A or G purified from hybridoma culture supernatant
Immunogen Mouse myeloma cell line NS0 derived recombinant human u-Plasminogen Activator (uPA)/Urokinase Catalytic Domain Ser21-Leu431 Accession # P00749

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>Sample</th>
<th>Recommended Concentration</th>
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</thead>
<tbody>
<tr>
<td>Western Blot</td>
<td>Recombinant Human u-Plasminogen Activator (uPA)/Urokinase (Catalog # 1310-SE) 1 μg/mL</td>
</tr>
<tr>
<td>Immunoprecipitation</td>
<td>Conditioned cell culture medium spiked with Recombinant Human u-Plasminogen Activator (uPA)/Urokinase (Catalog # 1310-SE), see our available Western blot detection antibodies 25 μg/mL</td>
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</tbody>
</table>

Human u-Plasminogen Activator/Urokinase Sandwich Immunoassay
ELISA Capture 2-8 μg/mL Human u-Plasminogen Activator (uPA)/Urokinase Catalytic Domain Antibody (Catalog # MAB1310)
ELISA Detection 0.1-0.4 μg/mL Human u-Plasminogen Activator (uPA)/Urokinase Biotinylated Antibody (Catalog # BAF1310) Recombinant Human u-Plasminogen Activator (uPA)/Urokinase (Catalog # 1310-SE)

PREPARATION AND STORAGE
Reconstitution Reconstitute at 0.5 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.

BACKGROUND
uPA is a serine protease with an extremely limited substrate specificity, cleaving the sequence Cys-Pro-Arg-Gly-Arg560-Val561-Val-Gly-Gly-Cys in plasminogen to form plasmin (1). uPA is a potent marker of invasion and metastasis in a variety of human cancers associated with breast, stomach, colon, bladder, ovary, brain and endometrium (2). For example, the combination (both low vs. either or both high) of uPA and its inhibitor, plasminogen activator inhibitor-1 (PAI-1), outperforms the single factors as well as other traditional prognostic factors with regard to risk group assessment for breast cancer, particularly in node-negative breast cancer (3). The human uPA is initially synthesized as 431 amino acid precursor with a N-terminal signal peptide (20 residues) (4-6). The single chain molecule is processed into a disulfide-linked two-chain molecule. The B chain starting at Ile179 corresponds to the catalytic domain. Two forms of the A chain exist, one starting at Ser21 (the long form) and the other at Lys156 (the short form). The resulting two-chain forms have different molecular weights (MW). The B chain is common for both forms whereas the long and short A chains are unique to the high and low MW forms, respectively. The long A chain contains an EGF-like domain, which is responsible for binding of the uPA receptor (uPAR).

References:

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