uPA (urokinase-type plasminogen activator) and tPA (tissue plasminogen activator) are serine proteases that are members of the trypsin family, and they are essential to the intrinsic coagulation system. tPA is primarily involved in fibrinolysis, whereas uPA principally mediates cell migration and tissue remodeling processes. uPA and tPA are responsible for cleaving plasminogen, a large serum β-globulin that is deposited on the fibrin strands within a thrombus. uPA and tPA preferentially target plasminogen at the Arg-Val bond to produce plasm in (also designated fibrinolysin), which is a trypsin-like enzyme that acts on Arg-Lys bonds in Fibrin and Fibrinogen and contributes to the systematic activation of the coagulation cascade. uPA and tPA each consist of two chains that are designated A and B. The A chain of uPA can be cleaved, resulting in low and high molecular mass forms. uPA and tPA are regulated by the serpin family members PAI-1 and PAI-2, which are serine proteinase inhibitors that complex with uPA, tPA and other targeted proteinases and then slowly disassociate to produce cleaved species that fold into stable inactive conformations.

Chromosomal Location
Genetic locus: PLAU (human) mapping to 10q22.2; Plau (mouse) mapping to 14 A 3.

Source
uPA (M-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of uPA of rat origin.

Product
Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-6831 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Applications
uPA (M-20) is recommended for detection of β-chain and inactive 52 kDa precursor forms of uPA of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation (1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000). Suitable for use as control antibody for uPA siRNA (h): sc-36779, uPA siRNA (m): sc-36780, uPA shRNA Plasmid (h): sc-36779-SH, uPA shRNA Plasmid (m): sc-36780-SH, uPA shRNA (h) Lentiviral Particles: sc-36779-V and uPA shRNA (m) Lentiviral Particles: sc-36780-V.

Molecular Weight of uPA precursor: 55 kDa.
Molecular Weight of active uPA enzyme: 33 kDa.
Positive Controls: Caki-1 cell lysate: sc-2224 or MCF7 whole cell lysate: sc-2204.

Storage
Store at 4°C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

Data
Western blot analysis of authentic human uPA (A,B).
Antibodies tested include uPA (C-20: sc-6830 (A)) and uPA (M-20: sc-6831 (B)).

Select Product Citations

Research Use
For research use only, not for use in diagnostic procedures.

Try uPA (H77A10): sc-59727 or uPA (PGM2005): sc-59729, our highly recommended monoclonal alternatives to uPA (M-20).