

# p-plasminogen (Ser 578): sc-16310

## BACKGROUND

Cleavage of the serine proteinase plasminogen to form plasmin is the central event in the dissolution of blood clots by the fibrinolytic system. Within the fibrinolytic cascade, the serine proteinases, urokinase-type plasminogen activator (uPa) and tissue-type plasminogen activator (tPa), activate the pro-enzyme plasminogen by cleaving plasminogen to form the fibrinolytically active enzyme plasmin. The enzyme plasmin consists of a heavy chain of 561 amino acids, which originates from the N-terminus of plasminogen and a light chain of 230 amino acids, which is derived from the C-terminus of plasminogen. Plasmin is a pro-angiogenic proteinase that is capable of degrading a variety of extracellular matrix proteins, and it facilitates endothelial cell migration and angiogenesis. In the presence of free sulfhydryl donors (FSD), plasmin undergoes autoproteolysis and is converted to angiostatin. The resulting enzyme angiostatin blocks angiogenesis and neovascularization and can inhibit the growth of primary and metastatic tumors. In addition, plasminogen also exists in plasma in a phosphorylated state where Ser 578 is the major site of phosphorylation.

## CHROMOSOMAL LOCATION

Genetic locus: PLG (human) mapping to 6q26; Plg (mouse) mapping to 17 A1.

## SOURCE

p-plasminogen (Ser 578) is available as either goat (sc-16310) or rabbit (sc-16310-R) polyclonal affinity purified antibody raised against a short amino acid sequence containing Ser 578 phosphorylated plasminogen of human 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-16310 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

p-plasminogen (Ser 578) is recommended for detection of Ser 578 phosphorylated plasminogen 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

p-plasminogen (Ser 578) is also recommended for detection of correspondingly phosphorylated plasminogen in additional species, including equine, canine and bovine.

Suitable for use as control antibody for plasminogen siRNA (h): sc-40857, plasminogen siRNA (m): sc-40858, plasminogen shRNA Plasmid (h): sc-40857-SH, plasminogen shRNA Plasmid (m): sc-40858-SH, plasminogen shRNA (h) Lentiviral Particles: sc-40857-V and plasminogen shRNA (m) Lentiviral Particles: sc-40858-V.

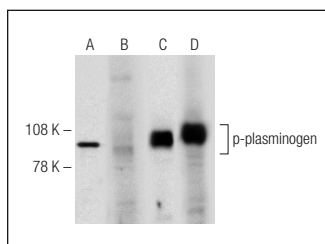
Molecular Weight of p-plasminogen: 90 kDa.

Positive Controls: Human platelet whole cell lysate: sc-363773.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: for goat primary antibody (sc-16310): use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), for rabbit primary antibody (sc-16310-R): use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Western Blotting Luminol Reagent: sc-2048 and Lambda Phosphatase: sc-200312A. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: for goat primary antibody (sc-16310): use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941, for rabbit primary antibody (sc-16310-R): use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



Western blot analysis of plasminogen phosphorylation in untreated (**A, C**) and lambda protein phosphatase (sc-200312A) treated (**B, D**) human platelet extracts. Antibodies tested include p-plasminogen (Ser 578)-R: sc-16310-R (**A, B**) and plasminogen (H-14): sc-15033 (**C, D**).

## STORAGE

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

## RESEARCH USE

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