



## uPAR (M-17): sc-9795

### BACKGROUND

Urokinase plasminogen activator receptor (uPAR), also designated CD87, is a glycoprotein I-anchored surface receptor specific for urokinase plasminogen activator (uPA). Upon binding to uPAR, uPA converts the surface bound, large serum  $\beta$ -globulin, plasminogen to plasmin. Plasmin, which is also designated fibrinolysin, is a trypsin-like enzyme that acts on Arg-Lys bonds and induces pericellular proteolysis in fibrin and fibrinogen, and thereby contributes to the systematic activation of the coagulation cascade. This pathway is observed during re-epithelialization of lesions, wound healing and tissue remodeling. uPA and uPAR are known to be overexpressed in mesenchymal and epithelial origin tumor cells and are required for tumor invasion and metastasis. Ras, MEK, ERK and MLCK function as downstream effectors in the uPAR-dependent signaling cascade, which is initiated by uPA binding, and promotes cellular migration in an integrin selective manner.

### REFERENCES

1. Milligan, K.S. 1987. Tissue-type plasminogen activator: a new fibrinolytic agent. *Heart Lung* 16: 69-74.
2. Roldan, A.L., et al. 1990. Cloning and expression of the receptor for human urokinase plasminogen activator, a central molecule in cell surface, plasmin dependent proteolysis. *EMBO J.* 9: 467-474.
3. Behrendt, N., et al. 1990. The human receptor for urokinase plasminogen activator. NH<sub>2</sub>-terminal amino acid sequence and glycosylation variants. *J. Biol. Chem.* 265: 6453-6460.
4. Solberg, H., et al. 1992. Identification and characterization of the murine cell surface receptor for the urokinase-type plasminogen activator. *Eur. J. Biochem.* 205: 451-458.
5. Prentice, C.R., et al. 1993. The fibrinolytic response to ancreod therapy: characterization of fibrinogen and fibrin degradation products. *Br. J. Haematol.* 83: 276-281.
6. Ghiso, J.A., et al. 1999. Deregulation of the signaling pathways controlling urokinase production. Its relationship with the invasive phenotype. *Eur. J. Biochem.* 263: 295-304.
7. Nguyen, D.H., et al. 1999. Myosin light chain kinase functions downstream of Ras/ERK to promote migration of urokinase-type plasminogen activator-stimulated cells in an integrin-selective manner. *J. Cell. Biol.* 146: 149-164.

### CHROMOSOMAL LOCATION

Genetic locus: Plaur (mouse) mapping to 7 A3.

### SOURCE

uPAR (M-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of uPAR of mouse origin.

### PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-9795 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

uPAR (M-17) is recommended for detection of uPAR of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 uPAR siRNA (m): sc-36782, uPAR shRNA Plasmid (m): sc-36782-SH and uPAR shRNA (m) Lentiviral Particles: sc-36782-V.

Molecular Weight of uPAR: 55-60 kDa.

### RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: 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), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: 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.

### SELECT PRODUCT CITATIONS

1. Weinmann, M., et al. 2002. Expression pattern of the urokinase plasminogen activator system in rat DS-sarcoma: role of oxygenation status and tumour size. *Br. J. Cancer* 86: 1355-1361.
2. Zhu, Y., et al. 2004. LR11, an LDL receptor gene family member, is a novel regulator of smooth muscle cell migration. *Circ. Res.* 94: 752-758.
3. Lahtinen, L., et al. 2009. Expression of urokinase-type plasminogen activator receptor is increased during epileptogenesis in the rat hippocampus. *Neuroscience* 163: 316-328.

### 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.

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.