

uPAR (D-5): sc-376118

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 β -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. NH₂-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 anicrod 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 (human) mapping to 19q13.31.

SOURCE

uPAR (D-5) is a mouse monoclonal antibody raised against amino acids 1-290 representing full length uPAR of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

uPAR (D-5) is recommended for detection of uPAR of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 uPAR siRNA (h): sc-36781, uPAR shRNA Plasmid (h): sc-36781-SH and uPAR shRNA (h) Lentiviral Particles: sc-36781-V.

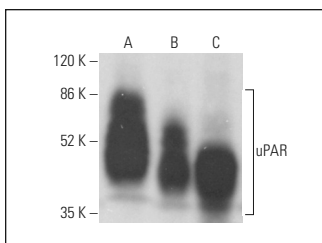
Molecular Weight of uPAR: 55-60 kDa.

Positive Controls: uPAR (h): 293T Lysate: sc-159642, HeLa whole cell lysate: sc-2200 or NCI-H1299 whole cell lysate: sc-364234.

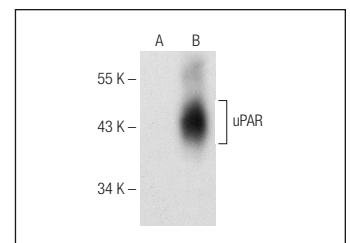
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



uPAR (D-5): sc-376118. Western blot analysis of uPAR expression in HeLa (A), HUV-EC-C (B) and NCI-H1299 (C) whole cell lysates.




uPAR (D-5): sc-376118. Western blot analysis of uPAR expression in non-transfected: sc-117752 (A) and human uPAR transfected: sc-159642 (B) 293T whole cell lysates.

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.



See **uPAR (E-3): sc-376494** for uPAR antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.