SANTA CRUZ BIOTECHNOLOGY, INC.

uPAR (10G7): sc-13522

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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.

CHROMOSOMAL LOCATION

Genetic locus: PLAUR (human) mapping to 19q13.31.

SOURCE

uPAR (10G7) is a mouse monoclonal antibody raised against full length uPAR 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.

uPAR (10G7) is available conjugated to agarose (sc-13522 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-13522 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-13522 PE), fluorescein (sc-13522 FITC), Alexa Fluor® 488 (sc-13522 AF488), Alexa Fluor® 546 (sc-13522 AF546), Alexa Fluor® 594 (sc-13522 AF594) or Alexa Fluor® 647 (sc-13522 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-13522 AF680) or Alexa Fluor® 790 (sc-13522 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

uPAR (10G7) 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 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500), flow cytometry (1 µg per 1 x 10^6 cells) 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.

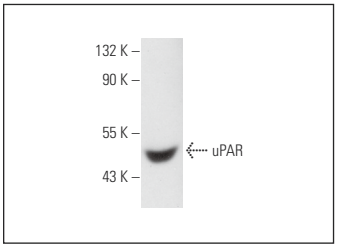
Molecular Weight of uPAR: 55-60 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or MCF7 whole cell lysate: sc-2206.

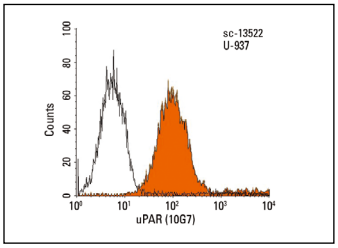
STORAGE

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

DATA



uPAR (10G7): sc-13522. Western blot analysis of human recombinant uPAR.



uPAR (10G7): sc-13522. Indirect FCM analysis of U-937 cells stained with uPAR (10G7), followed by PE-conjugated goat anti-mouse IgG: sc-3738. Black line histogram represents the isotype control, normal mouse IgG: sc-2025.

SELECT PRODUCT CITATIONS

1. Zhang, X., et al. 2002. A lymph node metastatic mouse model reveals alterations of metastasis-related gene expression in metastatic human oral carcinoma sublines selected from a poorly metastatic parental cell line. Cancer 95: 1663-1672.
2. Qian, J., et al. 2005. *In vitro* modeling of human pancreatic duct epithelial cell transformation defines gene expression changes induced by K-ras oncogenic activation in pancreatic carcinogenesis. Cancer Res. 65: 5045-5053.
3. Basak, S.K., et al. 2009. The malignant pleural effusion as a model to investigate intratumoral heterogeneity in lung cancer. PLoS ONE 4: e5884.
4. Taherian, A., et al. 2011. Differences in integrin expression and signaling within human breast cancer cells. BMC Cancer 11: 293.
5. Wang, Q., et al. 2013. The role of uPAR in epithelial-mesenchymal transition in small airway epithelium of patients with chronic obstructive pulmonary disease. Respir. Res. 14: 67.
6. Wang, Q., et al. 2015. Involvement of urokinase in cigarette smoke extract-induced epithelial-mesenchymal transition in human small airway epithelial cells. Lab. Invest. 95: 469-479.
7. Andreucci, E., et al. 2016. Roles of different IRES-dependent FGF2 isoforms in the acquisition of the major aggressive features of human metastatic melanoma. J. Mol. Med. 95: 97-108.
8. Menicacci, B., et al. 2017. Chronic resveratrol treatment inhibits MRC5 fibroblast SASP-related protumoral effects on melanoma cells. J. Gerontol. A, Biol. Sci. Med. Sci. 72: 1187-1195.
9. Wu, L., et al. 2022. MAGP2 induces tumor progression by enhancing uPAR-mediated cell proliferation. Cell. Signal. 91: 110214.

RESEARCH USE

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