

# HRPAP20 (G-10): sc-166928

## BACKGROUND

HRPAP20 (hormone-regulated proliferation-associated protein 20) is a 175 amino acid protein encoded by the human gene *NDUFA4*. HRPAP20 is a novel hormone-regulated, proliferation-associated protein. In tumor cell lines, constitutive HRPAP20 expression enhanced proliferation and suppressed apoptosis, characteristics frequently associated with malignant progression. Invasive breast cancer cell lines and human breast tumor specimens express elevated HRPAP20, which can increase malignant cell invasion in transfection experiments using such cell lines as MCF-7 and MDA-MB-231. Transfection with HRPAP20 will increase secretion of matrix metalloproteinase-9 (MMP-9). Conversely, knockdown of HRPAP20 with small interfering RNA will reduce invasion and inhibit secretion of MMP-9.

## REFERENCES

- Jones, J.L., et al. 2003. Primary breast myoepithelial cells exert an invasion-suppressor effect on breast cancer cells via paracrine down-regulation of MMP expression in fibroblasts and tumour cells. *J. Pathol.* 201: 562-572.
- Karp, C.M., et al. 2004. Identification of HRPAP20: a novel phosphoprotein that enhances growth and survival in hormone-responsive tumor cells. *Cancer Res.* 64: 1016-1025.
- Larkins, T.L., et al. 2006. Inhibition of cyclooxygenase-2 decreases breast cancer cell motility, invasion and matrix metalloproteinase expression. *BMC Cancer* 6: 181.
- Jiang, W.G., et al. 2006. Expression of membrane type-1 matrix metalloproteinase, MT1-MMP in human breast cancer and its impact on invasiveness of breast cancer cells. *Int. J. Mol. Med.* 17: 583-590.
- Byun, H.J., et al. 2006. A splice variant of CD99 increases motility and MMP-9 expression of human breast cancer cells through the AKT-, ERK-, and JNK-dependent AP-1 activation signaling pathways. *J. Biol. Chem.* 281: 34833-34847.

## CHROMOSOMAL LOCATION

Genetic locus: *NDUFA4* (human) mapping to 6q16.1.

## SOURCE

HRPAP20 (G-10) is a mouse monoclonal antibody raised against amino acids 1-175 representing full length HRPAP20 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

HRPAP20 (G-10) is available conjugated to agarose (sc-166928 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166928 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166928 PE), fluorescein (sc-166928 FITC), Alexa Fluor® 488 (sc-166928 AF488), Alexa Fluor® 546 (sc-166928 AF546), Alexa Fluor® 594 (sc-166928 AF594) or Alexa Fluor® 647 (sc-166928 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166928 AF680) or Alexa Fluor® 790 (sc-166928 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

HRPAP20 (G-10) is recommended for detection of HRPAP20 of human origin by Western Blotting (starting dilution 1:100, 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 HRPAP20 siRNA (h): sc-62476, HRPAP20 shRNA Plasmid (h): sc-62476-SH and HRPAP20 shRNA (h) Lentiviral Particles: sc-62476-V.

Molecular Weight (predicted) of HRPAP20: 20 kDa.

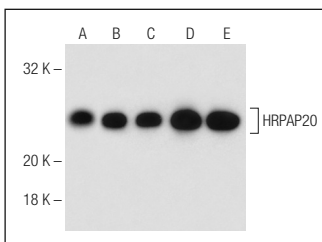
Molecular Weight (observed) of HRPAP20: 25 kDa.

Positive Controls: Ramos cell lysate: sc-2216, T-47D cell lysate: sc-2293 or K-562 whole cell lysate: sc-2203.

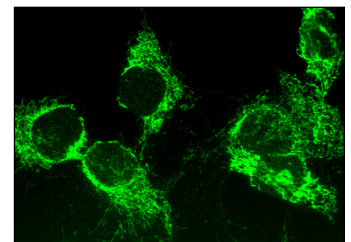
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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



HRPAP20 (G-10): sc-166928. Western blot analysis of HRPAP20 expression in T-47D (A), Ramos (B), MDA-MB-231 (C), K-562 (D) and Raji (E) whole cell lysates.



HRPAP20 (G-10): sc-166928. Immunofluorescence staining of formalin-fixed Hep G2 cells showing mitochondrial localization.

## 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.

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