

gankyrin (A-8): sc-166376

BACKGROUND

Gankyrin, a hepatocellular carcinoma-associated protein, regulates protein-protein interactions in cell cycle control as well as protein degradation. Furthermore, upregulation of gankyrin correlates with cell-cycle progression in normal hepatocytes as well. It contains six domains known as ankyrin repeats, and interacts with Rb, Cdk4, the 26S proteasome and MAGE-A4. This last interaction suppresses anchorage-independent growth in gankyrin overexpressing cells, demonstrating a possible mechanism for immunotherapy in hepatocellular carcinoma.

REFERENCES

- Nagao, T., et al. 2003. MAGE-A4 interacts with the liver oncoprotein gankyrin and suppresses its tumorigenic activity. *J. Biol. Chem.* 278: 10668-10674.
- Iwai, A., et al. 2003. Role of a novel oncogenic protein, gankyrin, in hepatocyte proliferation. *J. Gastroenterol.* 38: 751-758.
- Krzywda, S., et al. 2004. The crystal structure of gankyrin, an oncoprotein found in complexes with cyclin-dependent kinase 4, a 19 S proteasomal ATPase regulator, and the tumor suppressors Rb and p53. *J. Biol. Chem.* 279: 1541-1545.
- Higashitsuji, H., et al. 2005. The oncoprotein gankyrin binds to MDM2/HDM2, enhancing ubiquitylation and degradation of p53. *Cancer Cell* 8: 75-87.
- Higashitsuji, H., et al. 2007. The oncoprotein gankyrin interacts with RelA and suppresses NFκB activity. *Biochem. Biophys. Res. Commun.* 363: 879-884.
- Chen, Y., et al. 2007. Oncoprotein p28 GANK binds to RelA and retains NFκB in the cytoplasm through nuclear export. *Cell Res.* 17: 1020-1029.
- Umemura, A., et al. 2008. Association of gankyrin protein expression with early clinical stages and Insulin-like growth factor-binding protein 5 expression in human hepatocellular carcinoma. *Hepatology* 47: 493-502.

CHROMOSOMAL LOCATION

Genetic locus: PSMD10 (human) mapping to Xq22.3; Psm10 (mouse) mapping to X F1.

SOURCE

gankyrin (A-8) is a mouse monoclonal antibody raised against amino acids 1-231 representing full length gankyrin of human origin.

PRODUCT

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

STORAGE

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

APPLICATIONS

gankyrin (A-8) is recommended for detection of gankyrin of mouse, rat and 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 gankyrin siRNA (h): sc-72186, gankyrin siRNA (m): sc-72187, gankyrin shRNA Plasmid (h): sc-72186-SH, gankyrin shRNA Plasmid (m): sc-72187-SH, gankyrin shRNA (h) Lentiviral Particles: sc-72186-V and gankyrin shRNA (m) Lentiviral Particles: sc-72187-V.

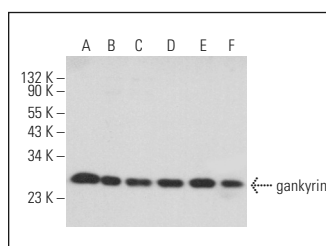
Molecular Weight of gankyrin: 25 kDa.

Positive Controls: JAR cell lysate: sc-2276, HeLa whole cell lysate: sc-2200 or HL-60 whole cell lysate: sc-2209.

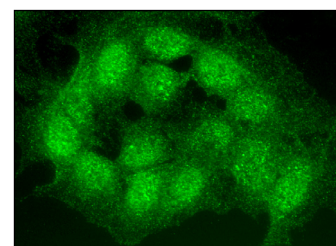
RECOMMENDED SUPPORT REAGENTS

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



gankyrin (A-8): sc-166376. Western blot analysis of gankyrin expression in HeLa (A), K-562 (B), HL-60 (C), ES-2 (D), JAR (E) and Hep G2 (F) whole cell lysates.



gankyrin (A-8): sc-166376. Immunofluorescence staining of formalin-fixed HepG2 cells showing nuclear and cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Li, J., et al. 2021. Genetically incorporated crosslinkers reveal NleE attenuates host autophagy dependent on PSMD10. *Elife* 10: e69047.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.