SANTA CRUZ BIOTECHNOLOGY, INC.

nucleoporin p62 (C-9): sc-48373

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Protein transport across the nucleus is a selective, multi-step process involving several cytoplasmic factors. Proteins must be recognized as import substrates, dock at the nuclear pore complex, and translocate across the nuclear envelope in an ATP-dependent fashion. Two cytosolic factors centrally involved in the recognition and docking process are the karyopherin α and karyopherin β proteins. The karyopherin holoenzyme is a heterodimer of α and β subunits. Karyopherin α functions in the recognition and targeting of substrates destined for nuclear import, while karyopherin β serves as an adaptor, tethering the karyopherin α substrate complex to docking proteins (termed nucleoporins) on the nuclear envelope. P62 glycoprotein is one such nucleoporin, and is not only involved in the nuclear import of proteins, but also the export of nascent mRNA strands. An additional protein, NTF2 (nuclear transport factor 2), interacts with nucleoporin p62 as a homodimer and may be an obligate component of functional p62.

CHROMOSOMAL LOCATION

Genetic locus: NUP62 (human) mapping to 19q13.33; Nup62 (mouse) mapping to 7 B4.

SOURCE

nucleoporin p62 (C-9) is a mouse monoclonal antibody raised against amino acids 401-522 of nucleoporin p62 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

nucleoporin p62 (C-9) is available conjugated to agarose (sc-48373 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-48373 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-48373 PE), fluorescein (sc-48373 FITC), Alexa Fluor® 488 (sc-48373 AF488), Alexa Fluor® 546 (sc-48373 AF546), Alexa Fluor® 594 (sc-48373 AF594) or Alexa Fluor® 647 (sc-48373 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-48373 AF680) or Alexa Fluor® 790 (sc-48373 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

nucleoporin p62 (C-9) is recommended for detection of nucleoporin p62 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

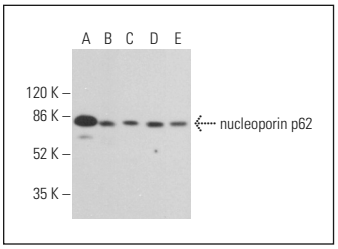
Suitable for use as control antibody for nucleoporin p62 siRNA (h): sc-36107, nucleoporin p62 siRNA (m): sc-36108, nucleoporin p62 shRNA Plasmid (h): sc-36107-SH, nucleoporin p62 shRNA Plasmid (m): sc-36108-SH, nucleoporin p62 shRNA (h) Lentiviral Particles: sc-36107-V and nucleoporin p62 shRNA (m) Lentiviral Particles: sc-36108-V.

Molecular Weight of nucleoporin p62: 62 kDa.

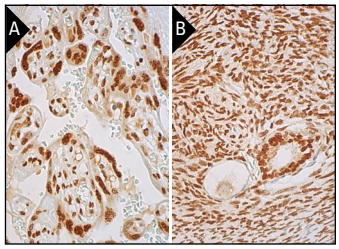
STORAGE

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

DATA



nucleoporin p62 (C-9): sc-48373. Western blot analysis of nucleoporin p62 expression in HeLa (**A**), HEL 92.1.7 (**B**), WEHI-231 (**C**), RAW 264.7 (**D**) and C6 (**E**) whole cell lysates.



nucleoporin p62 (C-9): sc-48373. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing nuclear staining of trophoblastic cells (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human ovary tissue showing nuclear staining of follicle cells and ovarian stroma cells (**B**).

SELECT PRODUCT CITATIONS

1. Kee, H.L., et al. 2012. A size-exclusion permeability barrier and nucleoporins characterize a ciliary pore complex that regulates transport into cilia. Nat. Cell Biol. 14: 431-437.
2. Tay, K.H., et al. 2015. Involvement of vacuolar H^+ -ATPase in killing of human melanoma cells by the sphingosine kinase analogue FTY720. Pigment Cell Melanoma Res. 28: 171-183.
3. Kapuria, V., et al. 2016. Proteolysis of HCF-1 by Ser/Thr glycosylation-incompetent O-GlcNAc transferase:UDP-GlcNAc complexes. Genes Dev. 30: 960-972.
4. Valdez, B.C., et al. 2017. The PARP inhibitor olaparib enhances the cytotoxicity of combined gemcitabine, busulfan and melphalan in lymphoma cells. Leuk. Lymphoma 58: 2705-2716.
5. Hazawa, M., et al. 2018. ROCK-dependent phosphorylation of NUP62 regulates p63 nuclear transport and squamous cell carcinoma proliferation. EMBO Rep. 19: 73-88.
6. Wei, Y.L. and Yang, W.X. 2019. Kinesin-14 motor protein KIFC1 participates in DNA synthesis and chromatin maintenance. Cell Death Dis. 10: 402.
7. Kim, J.H., et al. 2020. Protective effects of evogliptin on steatohepatitis in high-fat-fed mice. Int. J. Mol. Sci. 21: 6743.
8. Shen, Q., et al. 2021. Physical confinement during cancer cell migration triggers therapeutic resistance and cancer stem cell-like behavior. Cancer Lett. 506: 142-151.

RESEARCH USE

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