

# Nup98 (C-5): sc-74578

## BACKGROUND

Nuclear pore complexes (NPCs) are the channels for the bi-directional movement of macromolecules between the nucleus and cytoplasm, and contain more than 100 different subunits. Many of them belong to a family called nucleoporins, which are characterized by the presence of O-linked N-acetylglucosamine moieties and a distinctive pentapeptide repeat (XFXFG). The Nup98 gene encodes precursor proteins that generate two nucleoplasmically oriented nucleoporins, Nup98 and Nup96. The O-linked glycoprotein, Nup98 is a component of the nuclear pore complex. Nup98 is essential for gastrulation, a developmental stage that is associated with rapid cell proliferation, but dispensable for basal cell growth. Nup98 plays a role in RNA export from the nucleus and it appears to be an essential component of multiple RNA export pathways. Nup98 is a member of the GLFG nucleoporin family. The t(7;11)(p15;p15) translocation in acute myeloid leukaemia fuses the genes for Nup98 and class I homeoprotein HoxA9. Nup98-HoxA9 fusion protein may promote leukemogenesis through inhibiting of HoxA9-mediated terminal differentiation and/or aberrant nucleocytoplasmic transport.

## CHROMOSOMAL LOCATION

Genetic locus: NUP98 (human) mapping to 11p15.4; Nup98 (mouse) mapping to 7 E3.

## SOURCE

Nup98 (C-5) is a mouse monoclonal antibody raised against amino acids 581-880 mapping within an internal region of Nup98 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Nup98 (C-5) is available conjugated to agarose (sc-74578 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-74578 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-74578 PE), fluorescein (sc-74578 FITC), Alexa Fluor® 488 (sc-74578 AF488), Alexa Fluor® 546 (sc-74578 AF546), Alexa Fluor® 594 (sc-74578 AF594) or Alexa Fluor® 647 (sc-74578 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-74578 AF680) or Alexa Fluor® 790 (sc-74578 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

Nup98 (C-5) is recommended for detection of Nup98 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).

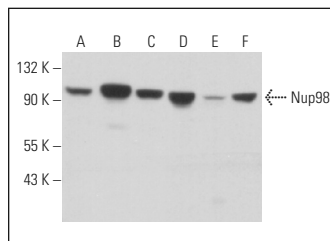
Suitable for use as control antibody for Nup96/98 siRNA (h): sc-43535, Nup96/98 siRNA (m): sc-43536, Nup96/98 shRNA Plasmid (h): sc-43535-SH, Nup96/98 shRNA Plasmid (m): sc-43536-SH, Nup96/98 shRNA (h) Lentiviral Particles: sc-43535-V and Nup96/98 shRNA (m) Lentiviral Particles: sc-43536-V.

Molecular Weight of Nup98: 97 kDa.

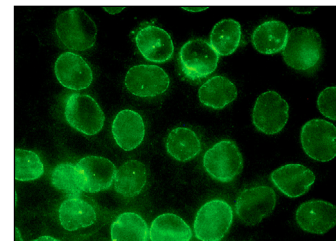
## STORAGE

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

## DATA



Nup98 (C-5): sc-74578. Western blot analysis of Nup98 expression in K-562 (A), HeLa (B), NAMALWA (C), Neuro-2A (D), BYDP (E) and A-10 (F) whole cell lysates.



Nup98 (C-5): sc-74578. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear membrane localization.

## SELECT PRODUCT CITATIONS

- Singer, S., et al. 2012. Nuclear pore component Nup98 is a potential tumor suppressor and regulates posttranscriptional expression of select p53 target genes. *Mol. Cell* 48: 799-810.
- Walker, E.J., et al. 2013. Rhinovirus 3C protease facilitates specific nucleoporin cleavage and mislocalisation of nuclear proteins in infected host cells. *PLoS ONE* 8: e71316.
- Lian, A.T., et al. 2015. IQGAP1 is associated with nuclear envelope reformation and completion of abscission. *Cell Cycle* 14: 2058-2074.
- Franks, T.M., et al. 2016. Evolution of a transcriptional regulator from a transmembrane nucleoporin. *Genes Dev.* 30: 1155-1171.
- Lake, M.P. and Bouchard, L.S. 2017. Targeted nanodiamonds for identification of subcellular protein assemblies in mammalian cells. *PLoS ONE* 12: e0179295.
- Su, Y., et al. 2018. Post-translational modification localizes MYC to the nuclear pore basket to regulate a subset of target genes involved in cellular responses to environmental signals. *Genes Dev.* 32: 1398-1419.
- Khalaf, B., et al. 2019. Ankyrin-G induces nucleoporin Nup358 to associate with the axon initial segment of neurons. *J. Cell Sci.* 132: jcs222802.
- Shen, B., et al. 2020. Hepatitis B virus X protein modulates upregulation of DHX9 to promote viral DNA replication. *Cell. Microbiol.* 22: e13148.
- Urizar-Arenaza, I., et al. 2020. SPANX-A/D protein subfamily plays a key role in nuclear organisation, metabolism and flagellar motility of human spermatozoa. *Sci. Rep.* 10: 5625.

## RESEARCH USE

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

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