

Nup205 (H-1): sc-377047

BACKGROUND

The nuclear pore complex (NPC) mediates bidirectional macromolecular traffic between the nucleus and cytoplasm in eukaryotic cells and is comprised of more than 100 different subunits. Many of the subunits belong to a family called nucleoporins (Nups), which are characterized by the presence of O-linked-N-acetylglucosamine moieties and a distinctive pentapeptide repeat (XFXFG). Nup205 (nucleoporin 205 kDa), also known as C7orf14 or KIAA0225, is a 2,012 amino acid that localizes to the nucleus and functions as an essential component of the nuclear pore complex. The gene encoding Nup205 maps to human chromosome 7, which houses over 1,000 genes and comprises nearly 5% of the human genome. Defects in some of the genes localized to chromosome 7 have been linked to osteogenesis imperfecta, Williams-Beuren syndrome, Pendred syndrome, lissencephaly, citrullinemia and Shwachman-Diamond syndrome.

REFERENCES

1. Grandi, P., et al. 1997. Nup93, a vertebrate homologue of yeast Nic96p, forms a complex with a novel 205-kDa protein and is required for correct nuclear pore assembly. *Mol. Biol. Cell* 8: 2017-2038.
2. Le Rouzic, E., et al. 2002. Docking of HIV-1 Vpr to the nuclear envelope is mediated by the interaction with the nucleoporin hCG1. *J. Biol. Chem.* 277: 45091-45098.
3. Hase, M.E. and Cordes, V.C. 2003. Direct interaction with Nup153 mediates binding of Tpr to the periphery of the nuclear pore complex. *Mol. Biol. Cell* 14: 1923-1940.

CHROMOSOMAL LOCATION

Genetic locus: NUP205 (human) mapping to 7q33; Nup205 (mouse) mapping to 6 B1.

SOURCE

Nup205 (H-1) is a mouse monoclonal antibody raised against amino acids 661-960 mapping within an internal region of Nup205 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.

Nup205 (H-1) is available conjugated to agarose (sc-377047 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377047 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377047 PE), fluorescein (sc-377047 FITC), Alexa Fluor® 488 (sc-377047 AF488), Alexa Fluor® 546 (sc-377047 AF546), Alexa Fluor® 594 (sc-377047 AF594) or Alexa Fluor® 647 (sc-377047 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-377047 AF680) or Alexa Fluor® 790 (sc-377047 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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STORAGE

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

APPLICATIONS

Nup205 (H-1) is recommended for detection of Nup205 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 Nup205 siRNA (h): sc-89531, Nup205 siRNA (m): sc-150120, Nup205 shRNA Plasmid (h): sc-89531-SH, Nup205 shRNA Plasmid (m): sc-150120-SH, Nup205 shRNA (h) Lentiviral Particles: sc-89531-V and Nup205 shRNA (m) Lentiviral Particles: sc-150120-V.

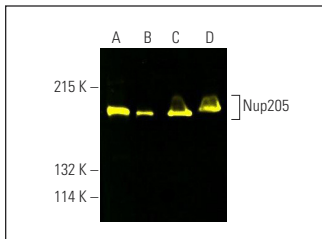
Molecular Weight of Nup205: 228 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, CCRF-CEM cell lysate: sc-2225 or Daudi cell lysate: sc-2415.

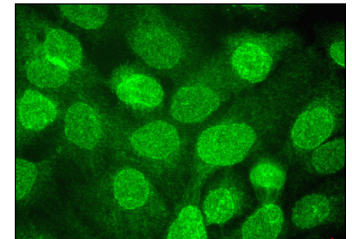
RECOMMENDED SUPPORT REAGENTS

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



Nup205 (H-1) Alexa Fluor® 488: sc-377047 AF488. Direct fluorescent western blot analysis of Nup205 expression in CCRF-CEM (A), Daudi (B), K-562 (C) and NTERA-2 cl.D1 (D) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214.



Nup205 (H-1): sc-377047. Immunofluorescence staining of formalin-fixed A-431 cells showing nuclear membrane and membrane localization.

SELECT PRODUCT CITATIONS

1. Zhang, K., et al. 2018. Stress granule assembly disrupts nucleocytoplasmic transport. *Cell* 173: 958-971.e17.
2. Coyne, A.N., et al. 2020. G4C2 repeat RNA initiates a POM121-mediated reduction in specific nucleoporins in C9orf72 ALS/FTD. *Neuron* 107: 1124-1140.e11.

RESEARCH USE

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