

### Background

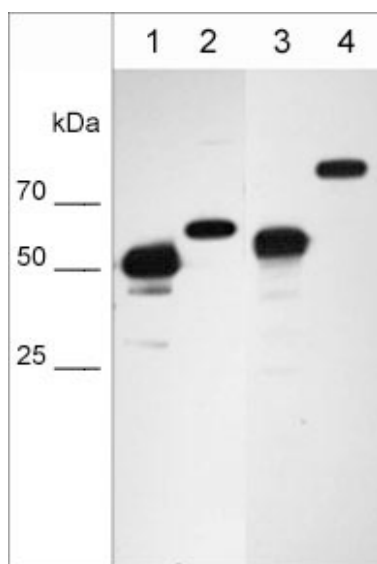
Active transport of proteins and RNA into and out of the nucleus occurs via the nuclear pore complex (NPC). The NPC is formed by a multiprotein complex that includes nucleoporin proteins. Specific nuclear localization sequences found in proteins target proteins for active transport into the nucleus through the NPC. Nucleoporin p62 is the best characterized member of the family of nucleoporins found in the NPC. A tightly associated complex is formed by p62 and two other nucleoporins, p54 and p58. p54 binds to a carboxy-terminal coiled-coil domain of p62 and p58 binds to a dimer of p54. The amino-terminal domain of p62 contains a series of XFXFX repeats and is joined to the coiled-coil domain by a threonine-rich linker segment. The major role of p62 is maintenance of the structural integrity of NPCs.



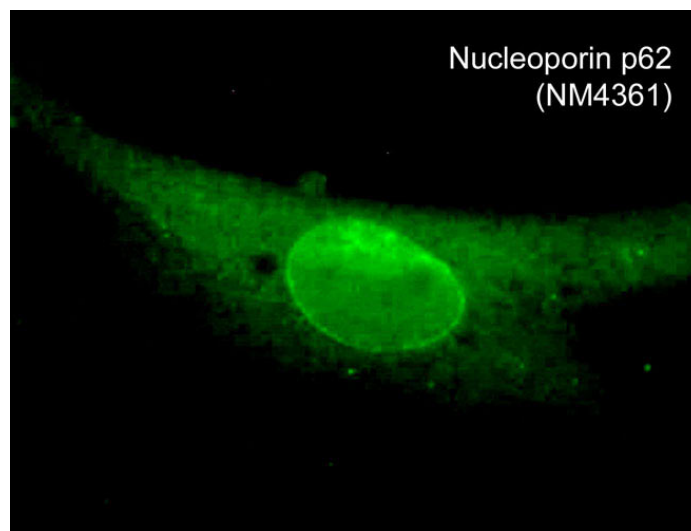
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### Background References

Carmo-Fonseca M. et al. (1991) *Eur J Cell Biol.* 55(1):17-30.  
Newmeyer, D.D. (1993) *Curr Opin Cell Biol.* 5(3):395.



Western blot image of cell structure markers in NCI-H1915 lung carcinoma cells. The blot was probed with anti-Vimentin intermediate filament protein VM4341 (lane 1), anti-Nucleoporin p62 NM4361 (lane 2), anti-Hsp60 mitochondrial protein HM4381 (lane 3), and anti-Calnexin endoplasmic reticulum protein CM4371 (lane 4).



Immunocytochemical labeling of Nucleoporin p62 in paraformaldehyde-fixed and NP40-permeabilized A7r5 cells. The fixed cells were labeled with mouse monoclonal anti-Nucleoporin p62 (N-terminal region) and the antibody was detected using Goat anti-Mouse secondary antibodies conjugated to DyLight® 488.

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### Immunogen

**Uniprot ID: P37198**

Clone M436 was generated from a recombinant protein containing amino acid residues in the N-terminal region of human nucleoporin p62. This sequence has high homology to similar regions in rat, mouse, and chicken nucleoporin p62.

### Product Citations

Paakkola, T. et al. (2018) Hum Mol Genet. 27(24):4288.

*WB: human skin fibroblasts*

### Buffer and Storage

Mouse monoclonal purified with protein A chromatography is supplied in 100µl phosphate-buffered saline, 50% glycerol, 1 mg/ml BSA, and 0.05% sodium azide. Store at –20°C. Stable for 1 year.

### Applications

WB	1:500
ICC	1:50
ELISA	1:1000

### Species Reactivity

Hu, Rt, Ms, Ck

**Isotype:** IgG2b

End user should determine optimal dilution for their particular applications and experiments.

Western blot membranes were incubated with diluted antibody in 5% non-fat milk, Tris buffer, 0.04% Tween20 for 1 hour at room temperature.

Abbreviations: E = ELISA, ICC = immunocytochemistry, IHC = immunohistochemistry, IP = immunoprecipitation, MS = mass spectrometry, WB = western blot  
Hu = Human, Ms = Mouse, Rt = Rat, Ck = Chicken, F = Frog, B = Bovine

### Specificity

This antibody detects a 62 kDa\* protein corresponding to the apparent molecular mass of nucleoporin p62 on SDS-PAGE immunoblots of human HeLa and rat A7r5 cells. In immunocytochemistry, anti-Nucleoporin p62 specifically stains nuclei and nuclear envelope in paraformaldehyde fixed and NP-40 permeabilized cells.

\*All molecular weights (MW) are confirmed by comparison to MW standards and to western blot mobilities of known proteins with similar MW.

"Native" western blot utilizes non-reducing sample buffer (no mercaptoethanol or SDS), normal SDS-PAGE gel electrophoresis, and no methanol in transfer buffers.

### Related Products

HP4291 Histone H2B (C-terminus) Rabbit Polyclonal

GM3421 GM130 (C-terminal region) Mouse Monoclonal

EM3471 Early Endosome Antigen 1 (EEA1) Mouse Monoclonal

CM2811 Caveolin-1 Mouse Monoclonal

CM4371 Calnexin (N-terminal region) Mouse Monoclonal

HM4381 Hsp60 (N-terminal region) Mouse Monoclonal



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