**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 processes 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 7B4.

**SOURCE**

nucleoporin p62 (E-4) is a mouse monoclonal antibody raised against amino acids 401-522 of nucleoporin p62 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.

nucleoporin p62 (E-4) is available conjugated to agarose (sc-48389 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-48389 HRP), 200 µg/ml, for WB, IHC (IP) and ELISA; to either phycoerythrin (sc-48389 PE), fluorescein (sc-48389 FITC), Alexa Fluor® 488 (sc-48389 AF488), Alexa Fluor® 546 (sc-48389 AF546), Alexa Fluor® 594 (sc-48389 AF594) or Alexa Fluor® 647 (sc-48389 AF647), 200 µg/ml, for WB (RGB), IF, IHC (IP) and FCM; and to either Alexa Fluor® 680 (sc-48389 AF680) or Alexa Fluor® 790 (sc-48389 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

**APPLICATIONS**

nucleoporin p62 (E-4) 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).


Molecular Weight of nucleoporin p62: 62 kDa.

Positive Controls: BJAB whole cell lysate: sc-2207.

**STORAGE**

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

**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.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA.

**SELECT PRODUCT CITATIONS**


**DATA**

nucleoporin p62 (E-4): sc-48389. Western blot analysis of nucleoporin p62 expression in BJAB (A), NIH/3T3 (B), Hela (C) and Jurkat (D) whole cell lysates and KNRK (E) nuclear extract.

nucleoporin p62 (E-4): sc-48389. Western blot analysis of nucleoporin p62 expression in Daudi whole cell lysates.

**RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended:

1) Western Blotting: use m-IgG HRP: sc-516102 or m-IgG HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz MarkerTM 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-IgG FITC: sc-483140 or m-IgG BP-FITC: sc-516140 or m-IgG BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

**PRODUCT INVOLVEMENT**

Molecular Weight of nucleoporin p62: 62 kDa.