**BACKGROUND**

The Npl4 gene encodes the 608 amino acid, endoplasmic reticulum and nuclear membrane protein Npl4 that forms a complex with p97/Cdc48p and Ufd1p. This complex plays a role in IP3 receptor processing by recognizing ubiquitinated IP3 receptors in the endoplasmic reticulum and delivering them to the proteasome for degradation. The Npl4 protein contains eight potential N-myristoylation sites, five potential N-glycosylation sites, several phosphorylation sites, and a C-terminal zinc finger motif. This protein is 96% homologous to the rat Npl4 protein, 44% homologous to the *Caenorhabditis elegans* Npl4 protein, and 34% homologous to the *Saccharomyces cerevisiae* Npl4 protein. Mutations in the Npl4 gene cause defects in nuclear envelope morphology, nuclear protein import, and nuclear poly(A) RNA export.

**CHROMOSOMAL LOCATION**

Genetic locus: NPLOC4 (human) mapping to 17q25.3; Nploc4 (mouse) mapping to 11 E2.

**SOURCE**

Npl4 (D-1) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of Npl4 of human origin.

**PRODUCT**

Each vial contains 200 µg IgG, kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Npl4 (D-1) is available conjugated to agarose (sc-365796 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365796 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365796 PE), fluorescein (sc-365796 FITC), Alexa Fluor® 488 (sc-365796 AF488), Alexa Fluor® 546 (sc-365796 AF546), Alexa Fluor® 594 (sc-365796 AF594) or Alexa Fluor® 647 (sc-365796 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365796 AF680) or Alexa Fluor® 790 (sc-365796 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

**RESEARCH USE**

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

**APPLICATIONS**

Npl4 (D-1) is recommended for detection of Npl4 isoforms 1 and 2 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 Npl4 siRNA (h): sc-61227, Npl4 siRNA (m): sc-61228, Npl4 shRNA Plasmid (h): sc-61227-SH, Npl4 shRNA Plasmid (m): sc-61228-SH, Npl4 shRNA (h) Lentiviral Particles: sc-61227-V and Npl4 shRNA (m) Lentiviral Particles: sc-61228-V.

Molecular Weight of Npl4: 69 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, SK-BR-3 cell lysate: sc-2218 or PC-3 cell lysate: sc-2220.

**RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG BP-HRP: sc-516102 or m-IgG 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-IgG BP-FITC: sc-516140 or m-IgG BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Hard-set Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

**DATA**

![Western blot analysis of Npl4 expression in SK-BR-3 whole cell lysate.](image)

![Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and cytoplasmic localization.](image)

**SELECT PRODUCT CITATIONS**


**STORAGE**

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

**PROTOCOLS**

See our web site at www.scbt.com for detailed protocols and support products.

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