

# Importin-12 (C-2): sc-376346

## BACKGROUND

The Importin complex consists of Importin- $\alpha$  and Importin- $\beta$  proteins which assist in transport of arginine- or serine-rich (SR) proteins across the nucleus. Importin-12, also known as Transportin-3 or Transportin-SR, is a member of the Importin- $\beta$  family and functions as a nuclear transport receptor for serine/arginine-rich proteins. Through recognition of phosphorylated RS domains, Importin-12 mediates the nuclear import of several SR proteins, such as splicing factors SFRS1 and SFRS2. By regulating the nucleocytoplasmic transport of these and other SR mRNA splicing factors, Importin-12 controls their access to mRNA and, therefore, acts a transcriptional regulator.

## REFERENCES

1. Kataoka, N., et al. 1999. Transportin-SR, a nuclear import receptor for SR proteins. *J. Cell Biol.* 145: 1145-1152.
2. Lai, M.C., et al. 2000. A human importin- $\beta$  family protein, transportin-SR2, interacts with the phosphorylated RS domain of SR proteins. *J. Biol. Chem.* 275: 7950-7957.
3. Zhang, C., et al. 2000. A novel karyopherin- $\beta$  homolog is developmentally and hormonally regulated in fetal lung. *Am. J. Respir. Cell Mol. Biol.* 22: 451-459.
4. Lai, M.C., et al. 2001. Transportin-SR2 mediates nuclear import of phosphorylated SR proteins. *Proc. Natl. Acad. Sci. USA* 98: 10154-10159.
5. Allemann, E., et al. 2002. A conserved *Drosophila* transportin-serine/arginine-rich (SR) protein permits nuclear import of *Drosophila* SR protein splicing factors and their antagonist repressor splicing factor 1. *Mol. Biol. Cell* 13: 2436-2447.
6. Lai, M.C., et al. 2003. A novel splicing regulator shares a nuclear import pathway with SR proteins. *EMBO J.* 22: 1359-1369.

## CHROMOSOMAL LOCATION

Genetic locus: TNPO3 (human) mapping to 7q32.1; Tnp3 (mouse) mapping to 6 A3.3.

## SOURCE

Importin-12 (C-2) is a mouse monoclonal antibody raised against amino acids 601-900 mapping near the C-terminus of Importin-12 of human origin.

## PRODUCT

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

Importin-12 (C-2) is available conjugated to agarose (sc-376346 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376346 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376346 PE), fluorescein (sc-376346 FITC), Alexa Fluor<sup>®</sup> 488 (sc-376346 AF488), Alexa Fluor<sup>®</sup> 546 (sc-376346 AF546), Alexa Fluor<sup>®</sup> 594 (sc-376346 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-376346 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-376346 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-376346 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

Importin-12 (C-2) is recommended for detection of Importin-12 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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).

Importin-12 (C-2) is also recommended for detection of Importin-12 in additional species, including canine and porcine.

Suitable for use as control antibody for Importin-12 siRNA (h): sc-89750, Importin-12 siRNA (m): sc-105574, Importin-12 shRNA Plasmid (h): sc-89750-SH, Importin-12 shRNA Plasmid (m): sc-105574-SH, Importin-12 shRNA (h) Lentiviral Particles: sc-89750-V and Importin-12 shRNA (m) Lentiviral Particles: sc-105574-V.

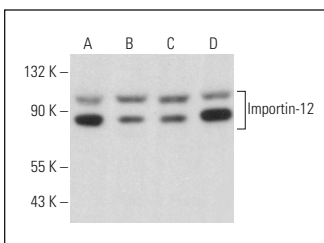
Molecular Weight of Importin-12: 110 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, K-562 whole cell lysate: sc-2203 or Ramos cell lysate: sc-2216.

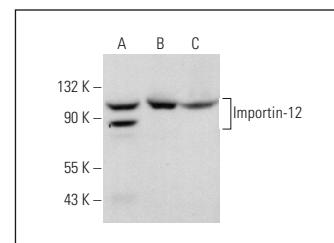
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> 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 $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## DATA



Importin-12 (C-2): sc-376346. Western blot analysis of Importin-12 expression in Ramos (A), Jurkat (B), K-562 (C) and NTERA-2 cl.D1 (D) whole cell lysates. Detection reagent used: m-IgG $\kappa$  BP-HRP: sc-516102.



Importin-12 (C-2): sc-376346. Western blot analysis of Importin-12 expression in Jurkat (A), NIH/3T3 (B) and c4 (C) whole cell lysates.

## 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.