

# Importin-7 (C-16): sc-55230

## BACKGROUND

Importin-7 (Ran-binding protein 7, RanBP7) is a 1,038 amino acid protein encoded by the human gene IPO7. Importin-7 belongs to the Importin  $\beta$  family and contains one importin N-terminal domain. Importin-7 functions in nuclear protein import, either by acting as an autonomous nuclear transport receptor or as an adapter-like protein in association with the Importin  $\beta$  subunit KPMB1. Acting autonomously, Importin-7 is thought to serve itself as receptor for nuclear localization signals (NLS) and to promote translocation of import substrates through the nuclear pore complex (NPC) by an energy requiring, Ran-dependent mechanism. At the nucleoplasmic side of the NPC, Ran binds to Importin-7, the Importin-7/substrate complex dissociates and Importin-7 is re-exported from the nucleus to the cytoplasm where GTP hydrolysis releases Ran. Importin-7 is a nuclear protein that is expressed in most tissues.

## REFERENCES

1. Jäkel, S., et al. 1999. The Importin  $\beta$ /Importin-7 heterodimer is a functional nuclear import receptor for Histone H1. *EMBO J.* 18: 2411-2423.
2. Baker, S.E., et al. 2002. Genetic interaction between integrins and mole-skin, a gene encoding a *Drosophila* homolog of Importin-7. *Genetics* 162: 285-296.

## CHROMOSOMAL LOCATION

Genetic locus: IPO7 (human) mapping to 11p15.4.

## SOURCE

Importin-7 (C-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Importin-7 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-55230 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Importin-7 (C-16) is recommended for detection of Importin-7 of human origin by Western Blotting (starting dilution 1:200, 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-7 (C-16) is also recommended for detection of Importin-7 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Importin-7 siRNA (h): sc-62501, Importin-7 shRNA Plasmid (h): sc-62501-SH and Importin-7 shRNA (h) Lentiviral Particles: sc-62501-V.

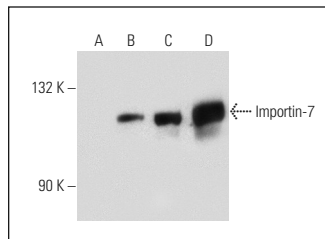
Molecular Weight of Importin-7: 120 kDa.

Positive Controls: Importin-7 (m): 293T Lysate: sc-178804, IMR-32 nuclear extract: sc-2148 or SK-N-MC nuclear extract: sc-2154.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



Importin-7 (C-16): sc-55230. Western blot analysis of Importin-7 expression in non-transfected: sc-117752 (A) and mouse Importin-7 transfected: sc-178804 (B) 293T whole cell lysates and IMR-32 (C) and SK-N-MC (D) nuclear extracts.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.


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Try **Importin-7 (E-2): sc-365231** or **Importin-7 (H-12): sc-271701**, our highly recommended monoclonal alternatives to Importin-7 (C-16).