

Importin-7 (T-19): sc-55235

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 β 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 β subunit KPNA1. 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

- Jäkel, S., et al. 1999. The Importin β /importin-7 heterodimer is a functional nuclear import receptor for histone H1. *EMBO J.* 18: 2411-2423.
- Baker, S.E., et al. 2002. Genetic interaction between integrins and moleskin, 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 (T-19) 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 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-55235 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Importin-7 (T-19) is recommended for detection of importin-7 of human and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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 (T-19) is also recommended for detection of importin-7 in additional species, including equine, canine, bovine, porcine and avian.

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.

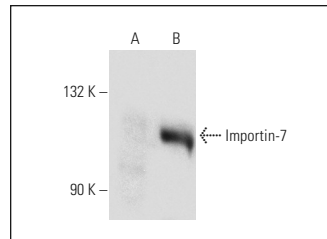
Molecular Weight of Importin-7: 120 kDa.

Positive Controls: IMR-32 nuclear extract: sc-2148 or SK-N-MC nuclear extract: sc-2154.

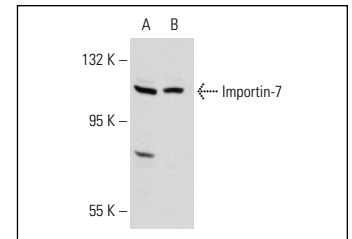
RECOMMENDED SECONDARY REAGENTS

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 (T-19): sc-55235. 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.



Importin-7 (T-19): sc-55235. Western blot analysis of Importin-7 expression in IMR-32 (A) and SK-N-MC (B) nuclear extracts.

SELECT PRODUCT CITATIONS

- Dzijak, R., et al. 2012. Specific nuclear localizing sequence directs two myosin isoforms to the cell nucleus in calmodulin-sensitive manner. *PLoS ONE* 7: e30529.

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 or our catalog for detailed protocols and support products.

MONOS
Satisfaction
Guaranteed

Try **Importin-7 (E-2): sc-365231** or **Importin-7 (H-12): sc-271701**, our highly recommended monoclonal alternatives to Importin-7 (T-19).