Exportin T (LOS1): sc-136203

SANTA CRUZ®
BIOTECHNOLOGY

The Power to Question

BACKGROUND

Exportin T, a nuclear export receptor for tRNA, selectively exports mature tRNA with correctly processed 5' and 3' ends. The TpsiC loop present in mature tRNA is also critical for the selection process. Exportin T binds tRNA in a RanGTP-dependent manner to form a nuclear export complex. Exportin T shuttles bidirectionally through nuclear pore complexes. The steady-state distribution of Exportin T is dependent on its RanGTP interaction. The RanGTP-dependent interaction between Exportin T and various nucleoporins increase the efficiency of Exportin T by holding empty and tRNA-bound Exportin T near nuclear pore complexes. The gene encoding human Exportin T maps to chromosome 12.

REFERENCES

1. Arts, G.J., Fornerod, M. and Mattaj, I.W. 1998. Identification of a nuclear export receptor for tRNA. Curr. Biol. 8: 305-314.

2. Kutay, U., Lipowsky, G., Izaurralde, E., Bischoff, F.R., Schwarzmaier, P., Hartmann, E. and Gorlich, D. 1998. Identification of a tRNA-specific nuclear export receptor. Mol. Cell 1: 359-369.

3. Arts, G.J., Kuersten, S., Romby, P., Ehresmann, B. and Mattaj, I.W. 1998. The role of Exportin T in selective nuclear export of mature tRNAs. EMBO J. 17: 7430-7441.

4. Lipowsky, G., Bischoff, F.R., Izaurralde, E., Kutay, U., Schafer, S., Gross, H.J., Beier, H. and Gorlich, D. 1999. Coordination of tRNA nuclear export with processing of tRNA. RNA 5: 539-549.

5. Kuersten, S., Arts, G.J., Walther, T.C., Englmeier, L. and Mattaj, I.W. 2002. Steady-state nuclear localization of Exportin T involves RanGTP binding and two distinct nuclear pore complex interaction domains. Mol. Cell. Biol. 22: 5708-5720.

6. LocusLink Report (LocusID: 11260) http://www.ncbi.nlm.nih.gov/LocusLink

CHROMOSOMAL LOCATION

Genetic locus: XPOT (human) mapping to 12q14.2; Xpot (mouse) mapping to 10 D2.

SOURCE

Exportin T (LOS1) is a mouse monoclonal antibody raised against full length Exportin T of human origin.

PRODUCT

Each vial contains 200 µg IgG$_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

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.

APPLICATIONS

Exportin T (LOS1) is recommended for detection of Exportin T of mouse, rat, human and bovine origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Exportin T siRNA (h): sc-41275, Exportin T siRNA (m): sc-41276, Exportin T shRNA Plasmid (h): sc-41275-SH, Exportin T shRNA Plasmid (m): sc-41276-SH, Exportin T shRNA (h) Lentiviral Particles: sc-41275-V and Exportin T shRNA (m) Lentiviral Particles: sc-41276-V.
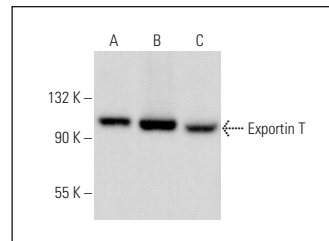
Molecular Weight of Exportin T: 110 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, Raji whole cell lysate: sc-364236 or TK-1 whole cell lysate: sc-364798.
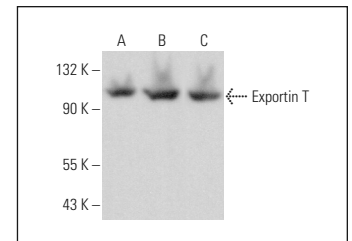
RECOMMENDED SUPPORT REAGENTS

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

DATA

Exportin T (LOS1): sc-136203. Western blot analysis of Exportin T expression in Jurkat (**A**), Raji (**B**) and TK-1 (**C**) whole cell lysates.

Exportin T (LOS1): sc-136203. Western blot analysis of Exportin T expression in HeLa (**A**), Ramos (**B**) and WEHI-231 (**C**) nuclear extracts.

RESEARCH USE

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