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- Mindermengenzuschlag
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- Expressversand

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SANTA CRUZ BIOTECHNOLOGY, INC.

ESX1 (h2): 293T Lysate: sc-116502

BACKGROUND

ESX1 was originally identified as a regulator of mouse embryogenesis. In mice, it is primarily expressed in placenta and testis where it functions in placenta/fetus development and spermatogenesis, respectively. In human cell lines, ESX1 has been elucidated as a paired-like homeoprotein that is proteolytically processed into N-terminal and C-terminal fragments. The N-terminal ESX1 fragment, which contains the homeodomain, localizes to the nucleus and represses mRNA transcription from the K-ras gene. A gain-of-function mutation of the K-ras gene is one of the most common genetic changes in human tumors. Therefore, ESX1 is implicated as a therapeutic target in the treatment of human cancers that have oncogenic K-ras mutations.

REFERENCES

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3. Yan, Y.T., Stein, S.M., Ding, J., Shen, M.M. and Abate-Shen, C. 2000. A novel PF/PN motif inhibits nuclear localization and DNA binding activity of the ESX1 homeoprotein. Mol. Cell. Biol. 20: 661-671.
4. Yanagihara, M., Ishikawa, S., Naito, M., Nakajima, J., Aburatani, H. and Hatakeyama, M. 2005. Paired-like homeoprotein ESXR1 acts as a sequence-specific transcriptional repressor of the human K-Ras gene. Oncogene 24: 5878-5887.
5. Yeh, Y.C., Yang, V.C., Huang, S.C. and Lo, N.W. 2005. Stage-dependent expression of extra-embryonic tissue-spermatogenesis-homeobox gene 1 (ESX1) protein, a candidate marker for X chromosome-bearing sperm. Reprod. Fertil. Dev. 17: 447-455.
6. Wang, X. and Zhang, J. 2007. Rapid evolution of primate ESX1, an X-linked placenta- and testis-expressed homeobox gene. Hum. Mol. Genet. 16: 2053-2060.
7. Nakajima, J., Ishikawa, S., Hamada, J., Yanagihara, M., Koike, T. and Hatakeyama, M. 2008. Anti-tumor activity of ESX1 on cancer cells harboring oncogenic K-Ras mutation. Biochem. Biophys. Res. Commun. 370: 189-194.

CHROMOSOMAL LOCATION

Genetic locus: ESX1 (human) mapping to Xq22.2.

PRODUCT

ESX1 (h2): 293T Lysate represents a lysate of human ESX1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

ESX1 (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive ESX1 antibodies. Recommended use: 10-20 µl per lane.

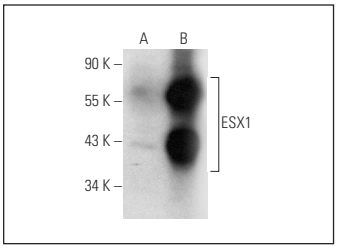
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

ESX1 (B-9): sc-365740 is recommended as a positive control antibody for Western Blot analysis of enhanced human ESX1 expression in ESX1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

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.

DATA



ESX1 (B-9): sc-365740. Western blot analysis of ESX1 expression in non-transfected: sc-117752 (**A**) and human ESX1 transfected: sc-116502 (**B**) 293T whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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