

ESX1 (A-21): sc-133566

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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- 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.
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CHROMOSOMAL LOCATION

Genetic locus: Esx1 (mouse) mapping to X F1.

SOURCE

ESX1 (A-21) is a Protein A purified rabbit polyclonal antibody raised against synthetic ESX1 peptide of mouse origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

APPLICATIONS

ESX1 (A-21) is recommended for detection of ESX1 of mouse 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for ESX1 siRNA (m): sc-77290, ESX1 shRNA Plasmid (m): sc-77290-SH and ESX1 shRNA (m) Lentiviral Particles: sc-77290-V.

Molecular Weight of full length ESX1: 65 kDa.

Molecular Weight of ESX1 N-terminal fragment: 45 kDa.

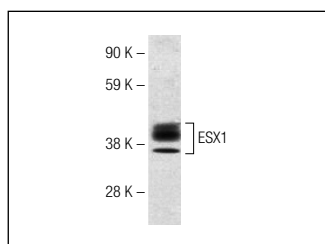
Molecular Weight of ESX1 C-terminal fragment: 20 kDa.

Positive Controls: mouse testis extract: sc-2405.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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).

DATA



ESX1 (A-21): sc-133566. Western blot analysis of ESX1 expression in mouse testis tissue extract.

SELECT PRODUCT CITATIONS

- You, L., Yan, K., Zou, J., Zhao, H., Bertos, N.R., Park, M., Wang, E. and Yang, X.J. 2015. The chromatin regulator brpf1 regulates embryo development and cell proliferation. *J. Biol. Chem.* 290: 11349-11364.

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.