SANTA CRUZ BIOTECHNOLOGY, INC.

LOC646439 (C-17): sc-83896

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Human gender is determined by the sex chromosomes X and Y. Pairing two X chromosomes during fertilization leads to female development, and the pairing of an X with a Y chromosome leads to male development. The Y chromosome is the human sex determining chromosome, necessary for male development. Deletion or defect of any gene residing on the Y chromosome is not lethal, however it would impair masculine development and function. Carrying an additional copy of the Y chromosome, as in males with XYY Syndrome, does not lead to an obvious phenotype and most XYY males are unaware of their additional Y chromosome. The Y chromosome contains about 86 genes encoded within approximately 58 million base pairs. The LOC646439 gene product has been provisionally designated LOC646439 pending further characterization.

REFERENCES

1. Vilain, E., et al. 1998. Mammalian sex determination: from gonads to brain. Mol. Genet. Metab. 65: 74-84.
2. Delbridge, M.L., et al. 1999. Mammalian Y chromosome evolution and the male-specific functions of Y chromosome-borne genes. Rev. Reprod. 4: 101-109.
3. Koopman, P. 1999. SRY and Sox-9: mammalian testis-determining genes. Cell. Mol. Life Sci. 55: 839-856.
4. Graves, J.A. 2001. From brain determination to testis determination: evolution of the mammalian sex-determining gene. Reprod. Fertil. Dev. 13: 665-672.
5. Graves, J.A. 2006. Sex chromosome specialization and degeneration in mammals. Cell 124: 901-914.
6. Krausz, C., et al. 2007. Genetic risk factors in male infertility. Arch. Androl. 53: 125-133.
7. Lefebvre, V., et al. 2007. Control of cell fate and differentiation by SRY-related high-mobility-group box (Sox) transcription factors. Int. J. Biochem. Cell Biol. 39: 2195-2214.
8. Wilhelm, D., et al. 2007. Sex determination and gonadal development in mammals. Physiol. Rev. 87: 1-28.

SOURCE

LOC646439 (C-17) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of LOC646439 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-83896 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

LOC646439 (C-17) is recommended for detection of LOC646439 of human 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)], 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).

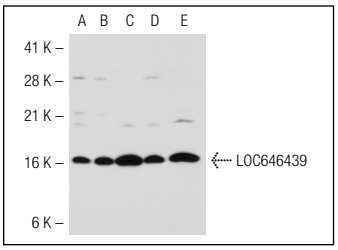
Molecular Weight of LOC646439: 14 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, K-562 whole cell lysate: sc-2203 or Hep G2 cell lysate: sc-2227.

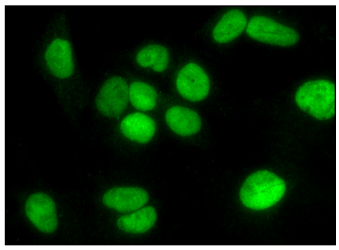
RECOMMENDED SECONDARY REAGENTS

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). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



LOC646439 (C-17): sc-83896. Western blot analysis of LOC646439 expression in HeLa (**A**), IMR-32 (**B**), Hep G2 (**C**), SW480 (**D**) and K-562 (**E**) whole cell lysates.



LOC646439 (C-17): sc-83896. Immunofluorescence staining of formalin-fixed Hep G2 showing nuclear localization.

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.