SANTA CRUZ BIOTECHNOLOGY, INC.

GCX-1 (L-23): sc-133613

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Human reproduction is controlled by the hypothalamic-pituitary gonadal axis (HPGA) that is laid down early in fetal development. GCX-1 (granulosa cell HMG box protein 1), also designated TOX2 (TOX high mobility group box family member 2), is a 488 amino acid transcription activator that is restricted to expression in the hypothalamus, pituitary, ovary, testis and uterus. This expression pattern in the HPGA suggests that this nuclear protein is likely related to specific events in reproduction, particularly in the female. GCX-1 contains a HMG-box domain, which is commonly found in proteins that function as intercellular regulators and transcriptional co-regulators, and are found to be involved in important events such as sex determination and in the regulation of T cell differentiation. There are two isoforms of GCX-1 which are produced as a result of alternative splicing events.

REFERENCES

1. Goldammer, T., et al. 2002. Assignment of Syndecan-2 (SDC2) gene to cattle chromosome band 14q22 and thymus high mobility group box protein TOX (TOX)^2 gene to cattle chromosome band 14q17→q18 by *in situ* hybridization. Cytogenet. Genome Res. 98: 311B.
2. Wilkinson, B., et al. 2002. TOX: an HMG box protein implicated in the regulation of thymocyte selection. Nat. Immunol. 3: 272-280.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 611163. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Kajitani, T., et al. 2004. Cloning and characterization of granulosa cell high-mobility group (HMG)-box protein-1, a novel HMG-box transcriptional regulator strongly expressed in rat ovarian granulosa cells. Endocrinology 145: 2307-2318.
5. Laz, E.V., et al. 2007. Characterization of three growth hormone-responsive transcription factors preferentially expressed in adult female liver. Endocrinology 148: 3327-3337.
6. Sower, S.A., et al. 2008. The origins of the vertebrate hypothalamic-pituitary-gonadal (HPG) and hypothalamic-pituitary-thyroid (HPT) endocrine systems: new insights from lampreys. Gen. Comp. Endocrinol. 161: 20-29.

CHROMOSOMAL LOCATION

Genetic locus: TOX2 (human) mapping to 20q13.12; Tox2 (mouse) mapping to 2 H3.

SOURCE

GCX-1 (L-23) is an affinity purified rabbit polyclonal antibody raised against synthetic GCX-1 peptide of human origin.

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 or our catalog for detailed protocols and support products.

PRODUCT

Each vial contains 50 µg IgG in 500 µl PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

APPLICATIONS

GCX-1 (L-23) is recommended for detection of GCX-1 of mouse, rat and 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

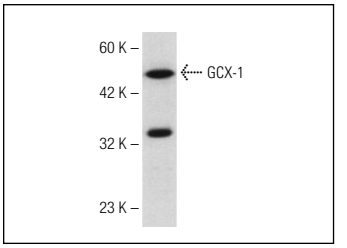
Suitable for use as control antibody for GCX-1 siRNA (h): sc-75122, GCX-1 siRNA (m): sc-145368, GCX-1 shRNA Plasmid (h): sc-75122-SH, GCX-1 shRNA Plasmid (m): sc-145368-SH, GCX-1 shRNA (h) Lentiviral Particles: sc-75122-V and GCX-1 shRNA (m) Lentiviral Particles: sc-145368-V.

Molecular Weight of GCX-1: 53 kDa.

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



GCX-1 (L-23): sc-133613. Western blot analysis of GCX-1 expression in Jurkat whole cell lysate.

RESEARCH USE

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