

# gametogenetin (E-14): sc-240496

## BACKGROUND

Gametogenetin, also known as GGN, is a 652 amino acid protein that is primarily expressed in testis and ovary. Interacting with POG (proliferation of germ cells), GGNBP1 and LCRG1, gametogenetin is likely involved in spermatogenesis. Gametogenetin exists as three alternatively spliced isoforms commonly known as gametogenetin protein 1 (GGN1), gametogenetin protein 2 (GGN2) and gametogenetin protein 3 (GGN3), which localize to nuclear membrane, cytoplasm and nucleus/nucleoli, respectively. GGN1 contains two transmembrane domains in its N-terminal half and 2 C-terminal arginine- and lysine-rich nucleolar targeting sequences. GGN1 and GGN3 are likely linked to germ cell development and both GGN1 and GGN2 may be involved in cell trafficking.

## REFERENCES

1. Lu, B. and Bishop, C.E. 2003. Mouse GGN1 and GGN3, two germ cell-specific proteins from the single gene Ggn, interact with mouse POG and play a role in spermatogenesis. *J. Biol. Chem.* 278: 16289-16296.
2. Zhang, J., Wang, Y., Zhou, Y., Cao, Z., Huang, P. and Lu, B. 2005. Yeast two-hybrid screens imply that GGNBP1, GGNBP2 and OAZ3 are potential interaction partners of testicular germ cell-specific protein GGN1. *FEBS Lett.* 579: 559-566.
3. Zhou, Y., Zhao, Q., Bishop, C.E., Huang, P. and Lu, B. 2005. Identification and characterization of a novel testicular germ cell-specific gene Ggnbp1. *Mol. Reprod. Dev.* 70: 301-307.
4. Zhao, Q., Zhou, Y., Cao, Z., Zhu, H., Huang, P. and Lu, B. 2005. Germ-cell specific protein gametogenetin protein 2 (GGN2), expression in the testis, and association with intracellular membrane. *Mol. Reprod. Dev.* 72: 31-39.
5. Jamsai, D., Bianco, D.M., Smith, S.J., Merriner, D.J., Ly-Huynh, J.D., Herlihy, A., Niranjana, B., Gibbs, G.M. and O'Bryan, M.K. 2008. Characterization of gametogenetin 1 (GGN1) and its potential role in male fertility through the interaction with the ion channel regulator, cysteine-rich secretory protein 2 (CRISP2) in the sperm tail. *Reproduction* 135: 751-759.

## CHROMOSOMAL LOCATION

Genetic locus: GGN (human) mapping to 19q13.2; Ggn (mouse) mapping to 7 B1.

## SOURCE

gametogenetin (E-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of gametogenetin of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-240496 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

gametogenetin (E-14) is recommended for detection of gametogenetin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Suitable for use as control antibody for gametogenetin siRNA (h): sc-97797, gametogenetin siRNA (m): sc-145322, gametogenetin shRNA Plasmid (h): sc-97797-SH, gametogenetin shRNA Plasmid (m): sc-145322-SH, gametogenetin shRNA (h) Lentiviral Particles: sc-97797-V and gametogenetin shRNA (m) Lentiviral Particles: sc-145322-V.

Molecular Weight of gametogenetin isoforms: 67/46/24 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.