

## GIOT-1 (C-12): sc-398187



The Power to Question

## BACKGROUND

GIOT-1 (gonadotropin-inducible transcription repressor 1), also known as ZNF 461 (zinc finger protein 461) is a 563 amino acid protein belonging to the Krüppel C<sub>2</sub>H<sub>2</sub>-type zinc-finger protein family. Localized to the nucleus, GIoT-1 is widely expressed in tissues, with highest levels in liver, kidney, small intestine, pancreas and thymus. GIoT-1 contains 12 C<sub>2</sub>H<sub>2</sub>-type zinc fingers and one KRAB domain. Because the KRAB domain functions as a transcriptional repressor when attached to the template DNA, GIoT-1 is thought to be involved in transcriptional regulation. The gene encoding GIoT-1 is localized to chromosome 19q13.12 and two isoforms of GIoT-1 exist as a result of alternative splicing events.

## REFERENCES

- Mizutani, T., et al. 2001. Cloning and characterization of gonadotropin-inducible ovarian transcription factors (GIOT-1 and -2) that are novel members of the (Cys)<sub>2</sub>-(His)<sub>2</sub>-type zinc finger protein family. *Mol. Endocrinol.* 15: 1693-1705.
- Dai, J., et al. 2003. Characterization of two novel KRAB-domain-containing zinc finger genes, ZNF460 and ZNF461, on human chromosome 19q13.1→q13.4. *Cytogenet. Genome Res.* 103: 74-78.
- Yazawa, T., et al. 2003. Involvement of cyclic adenosine 5'-monophosphate response element-binding protein, steroidogenic factor 1, and Dax-1 in the regulation of gonadotropin-inducible ovarian transcription factor 1 gene expression by follicle-stimulating hormone in ovarian granulosa cells. *Endocrinology* 144: 1920-1930.
- Urrutia, R. 2003. KRAB-containing zinc-finger repressor proteins. *Genome Biol.* 4: 231.
- Online Mendelian Inheritance in Man, OMIM™. 2004. Johns Hopkins University, Baltimore, MD. MIM Number: 608640. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Song, K.H., et al. 2006. Orphan nuclear receptor Nur77 induces zinc finger protein GIoT-1 gene expression, and GIoT-1 acts as a novel corepressor of orphan nuclear receptor SF-1 via recruitment of HDAC2. *J. Biol. Chem.* 281: 15605-15614.

## CHROMOSOMAL LOCATION

Genetic locus: ZNF461 (human) mapping to 19q13.12.

## SOURCE

GIOT-1 (C-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 71-98 within an internal region of GIoT-1 of human origin.

## PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-398187 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## APPLICATIONS

GIOT-1 (C-12) is recommended for detection of GIoT-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for GIoT-1 siRNA (h): sc-75130, GIoT-1 siRNA (h): sc-75131, GIoT-1 shRNA Plasmid (h): sc-75130-SH, GIoT-1 shRNA Plasmid (h): sc-75131-SH, GIoT-1 shRNA (h) Lentiviral Particles: sc-75130-V and GIoT-1 shRNA (h) Lentiviral Particles: sc-75131-V.

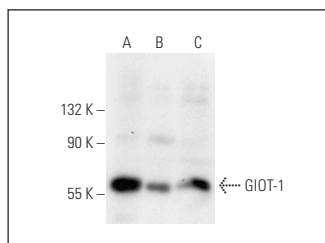
Molecular Weight of GIoT-1: 66 kDa.

Positive Controls: NTERA-2 cl.D1 whole cell lysate: sc-364181, HeLa whole cell lysate: sc-2200 or Jurkat whole cell lysate: sc-2204.

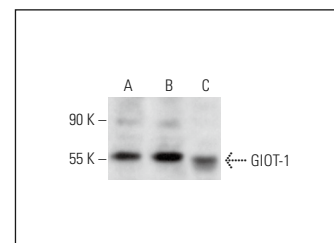
## RECOMMENDED SUPPORT REAGENTS

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. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



GIOT-1 (C-12): sc-398187. Western blot analysis of GIoT-1 expression in NTERA-2 cl.D1 (A), HeLa (B) and Jurkat (C) whole cell lysates.



GIOT-1 (C-12): sc-398187. Western blot analysis of GIoT-1 expression in HeLa (A) and c4 (B) whole cell lysates and K-562 nuclear extract (C).

## SELECT PRODUCT CITATIONS

- Jopek, K., et al. 2018. Effect of ACTH and hCG on the expression of gonadotropin-inducible ovarian transcription factor 1 (GIOT-1) gene in the rat adrenal gland. *Int. J. Mol. Sci.* 19: 2285.

## 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.