

# GIOT-1 (P-18): sc-82609

## 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

GIOT-1 (P-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of GIoT-1 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-82609 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.

## PROTOCOLS

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

## APPLICATIONS

GIOT-1 (P-18) is recommended for detection of GIoT-1 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); non cross-reactive with isoform GIoT1-2.

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

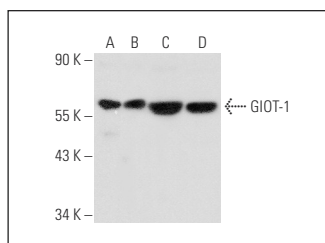
Molecular Weight of GIoT-1: 66 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, HEK293 whole cell lysate: sc-45136 or K-562 nuclear extract: sc-2130.

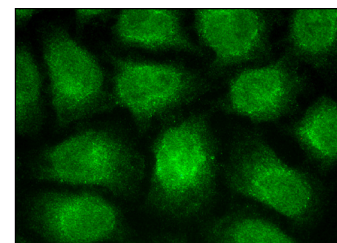
## RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## DATA



GIOT-1 (P-18): sc-82609. Western blot analysis of GIoT-1 expression in HEK293 (A) and HeLa (B) whole cell lysates and K-562 (C) and Hep G2 (D) nuclear extracts.



GIOT-1 (P-18): sc-82609. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and cytoplasmic localization.

## RESEARCH USE

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

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Try **GIOT-1 (C-12): sc-398187**, our highly recommended monoclonal alternative to GIoT-1 (P-18).