

# GC-1 (N-20): sc-84275

## BACKGROUND

GC-1, also known as OLFM4 (olfactomedin-4) or GW112, is a 510 amino acid protein that is secreted into extracellular space and contains one olfactomedin-like domain. Expressed at high levels in prostate, colon and small intestine, with lower levels in bone marrow and stomach tissue, GC-1 exists as a homomultimer that functions as an anti-apoptotic factor that promotes cell growth and proliferation. Specifically functioning to assist in the S to G<sub>2</sub>/M phase transition and to facilitate cell adhesion, GC-1 interacts with Grim19 and plays an important role in the pathogenesis of pancreatic, stomach and colon cancer. The gene encoding GC-1 maps to human chromosome 13, which houses over 400 genes, such as BRCA2 and RB1, and comprises nearly 4% of the human genome.

## REFERENCES

- McNearney, T.A., et al. 1987. Herpes simplex virus glycoproteins GC-1 and GC-2 bind to the third component of complement and provide protection against complement-mediated neutralization of viral infectivity. *J. Exp. Med.* 166: 1525-1535.
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- Zhang, X., et al. 2004. GW112, a novel antiapoptotic protein that promotes tumor growth. *Cancer Res.* 64: 2474-2481.
- Liu, W., et al. 2006. The glycoprotein hGC-1 binds to cadherin and lectins. *Exp. Cell Res.* 312: 1785-1797.
- Kobayashi, D., et al. 2007. Olfactomedin 4 promotes S-phase transition in proliferation of pancreatic cancer cells. *Cancer Sci.* 98: 334-340.
- Liu, W., et al. 2007. Expression of hGC-1 is correlated with differentiation of gastric carcinoma. *Histopathology* 51: 157-165.
- Chin, K.L., et al. 2008. The regulation of OLFM4 expression in myeloid precursor cells relies on NFκB transcription factor. *Br. J. Haematol.* 143: 421-432.
- Liu, W., et al. 2008. Reduced hGC-1 protein expression is associated with malignant progression of colon carcinoma. *Clin. Cancer Res.* 14: 1041-1049.

## CHROMOSOMAL LOCATION

Genetic locus: OLFM4 (human) mapping to 13q21.1.

## SOURCE

GC-1 (N-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of GC-1 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-84275 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

GC-1 (N-20) is recommended for detection of GC-1 of 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), 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).

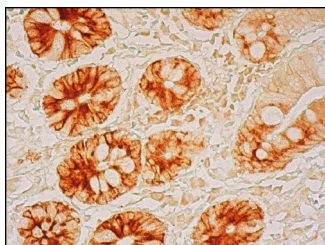
Suitable for use as control antibody for GC-1 siRNA (h): sc-75113, GC-1 shRNA Plasmid (h): sc-75113-SH and GC-1 shRNA (h) Lentiviral Particles: sc-75113-V.

Molecular Weight of GC-1: 54 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) 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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

## DATA



GC-1 (N-20): sc-84275. Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing membrane and cytoplasmic staining of glandular cells.

## 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.