

# GCDFP-15 (3G153): sc-59546

## BACKGROUND

Gross cystic disease fluid protein 15 (GCDFP-15) is a major protein component of benign breast gross cysts. It is a known marker of breast cancer, as it is found in approximately 50% of all breast cancer specimens. GCDFP-15, also known as PIP, for prolactin inducible protein, is a prolactin and androgen controlled protein. It is detectable in saliva, tears, sweat, seminal plasma, submucosal glands of the lung and amniotic fluid. PIP, the gene encoding GCDFP-15, is expressed in exocrine glands and, in pathologic conditions, in breast cysts and breast cancers exhibiting apocrine features. The PIP gene maps to the long arm of chromosome 7, a region frequently altered in mammary tumors.

## REFERENCES

1. Haagensen, D.E., et al. 1979. Breast gross cystic disease fluid analysis. I. Isolation and radioimmunoassay for a major component protein. *J. Natl. Cancer Inst.* 62: 239-247.
2. Haagensen, D.E., et al. 1980. Analysis of amniotic fluid, maternal plasma, and cord blood for a human breast gross cystic disease fluid protein. *Am. J. Obstet. Gynecol.* 138: 25-32.
3. Mazoujian, G., et al. 1983. Immunohistochemistry of a gross cystic disease fluid protein (GCDFP-15) of the breast. A marker of apocrine epithelium and breast carcinomas with apocrine features. *Am. J. Pathol.* 110: 105-112.
4. Loos, S., et al. 1999. Regulation of GCDFP-15 expression in human mammary cancer cells. *Int. J. Mol. Med.* 4: 135-140.
5. Caputo, E., et al. 1999. Biosynthesis and immunobiochemical characterization of gp17/GCDFP-15. A glycoprotein from seminal vesicles and from breast tumors, in HeLa cells and in *Pichia pastoris* yeast. *Eur. J. Biochem.* 265: 664-670.
6. Satoh, F., et al. 2000. Immunohistochemical analysis of GCDFP-15 and GCDFP-24 in mammary and non-mammary tissue. *Breast Cancer* 7: 49-55.
7. Lee, B., et al. 2002. Identification of mouse submaxillary gland protein in mouse saliva and its binding to mouse oral bacteria. *Arch. Oral Biol.* 47: 327-332.
8. Autiero, M., et al. 2002. Intragenic amplification and formation of extra-chromosomal small circular DNA molecules from the PIP gene on chromosome 7 in primary breast carcinomas. *Int. J. Cancer* 99: 370-377.

## CHROMOSOMAL LOCATION

Genetic locus: PIP (human) mapping to 7q34; Pip (mouse) mapping to 6 B2.1.

## SOURCE

GCDFP-15 (3G153) is a mouse monoclonal antibody raised against GCDFP-15 of human origin.

## PRODUCT

Each vial contains 100 µg IgG<sub>2a</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

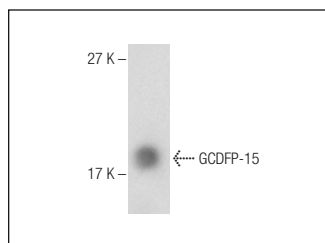
GCDFP-15 (3G153) is recommended for detection of GCDFP-15 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500); may cross-react with breast carcinoma, salivary duct carcinoma and apocrine epithelia.

Suitable for use as control antibody for GCDFP-15 siRNA (h): sc-40631, GCDFP-15 siRNA (m): sc-44723, GCDFP-15 shRNA Plasmid (h): sc-40631-SH, GCDFP-15 shRNA Plasmid (m): sc-44723-SH, GCDFP-15 shRNA (h) Lentiviral Particles: sc-40631-V and GCDFP-15 shRNA (m) Lentiviral Particles: sc-44723-V.

Molecular Weight of GCDFP-15: 15 kDa.

Positive Controls: T-47D whole cell lysate: sc-364193.

## DATA



GCDFP-15 (3G153): sc-59546. Western blot analysis of GCDFP-15 expression in T-47D whole cell lysate.

## 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) for detailed protocols and support products.