

# PSG9 (C-15): sc-240794

## BACKGROUND

PSG9 (pregnancy-specific  $\beta$ -1-glycoprotein 9), also known as PSG7 (pregnancy-specific glycoprotein 7), PS- $\beta$ -B (pregnancy-specific  $\beta$ -1 glycoprotein B) and PSBG-11 (pregnancy-specific  $\beta$ -1-glycoprotein 11), is a member of the PSG family, a group of closely related secreted glycoproteins that are highly expressed in fetal placental syncytiotrophoblast cells. The members of the PSG protein family all have a characteristic N-terminal domain that is homologous to the immunoglobulin variable region. PSGs become detectable in serum during the first two to three weeks of pregnancy and increase as the pregnancy progresses, eventually representing the most abundant fetal protein in the maternal blood at term. PSGs function to stimulate secretion of TH2-type cytokines from monocytes, and they may also modulate the maternal immune system during pregnancy, thereby protecting the semi-allotypic fetus from rejection. PSGs are commonly expressed in trophoblast tumors. Eleven human PSG proteins (PSG1-PSG11) have been described.

## REFERENCES

1. Thompson, J., Koumari, R., Wagner, K., Barnert, S., Schleussner, C., Schrewe, H., Zimmermann, W., Müller, G., Schempp, W. and Zaninetta, D. 1990. The human pregnancy-specific glycoprotein genes are tightly linked on the long arm of chromosome 19 and are coordinately expressed. *Biochem. Biophys. Res. Commun.* 167: 848-859.
2. Khan, W.N. and Hammarström, S. 1990. Identification of a new carcinoembryonic antigen (CEA) family member in human fetal liver—cloning and sequence determination of pregnancy-specific glycoprotein 7. *Biochem. Biophys. Res. Commun.* 168: 214-225.
3. Arakawa, F., Kuroki, M., Misumi, Y., Matsuo, Y. and Matsuoka, Y. 1990. The nucleotide and deduced amino acid sequences of a cDNA encoding a new species of pregnancy-specific  $\beta$  1-glycoprotein (PS  $\beta$  G). *Biochim. Biophys. Acta* 1048: 303-305.
4. Streydio, C., Swillens, S., Georges, M., Szpirer, C. and Vassart, G. 1990. Structure, evolution and chromosomal localization of the human pregnancy-specific  $\beta$  1 glycoprotein gene family. *Genomics* 6: 579-592.
5. Brophy, B.K., MacDonald, R.E., McLenachan, P.A. and Mansfield, B.C. 1992. cDNA sequence of the pregnancy-specific  $\beta$  1-glycoprotein-11s (PSG-11s). *Biochim. Biophys. Acta* 1131: 119-121.
6. McLenachan, P.A., Rutherford, K.J., Beggs, K.T., Sims, S.E. and Mansfield, B.C. 1994. Characterization of the PSG11 gene. *Genomics* 22: 356-363.
7. Olsen, A., Teglund, S., Nelson, D., Gordon, L., Copeland, A., Georgescu, A., Carrano, A. and Hammarström, S. 1994. Gene organization of the pregnancy-specific glycoprotein region on human chromosome 19: assembly and analysis of a 700-kb cosmid contig spanning the region. *Genomics* 23: 659-668.
8. Beauchemin, N., Draber, P., Dvokler, G., Gold, P., Gray-Owen, S., Grunert, F., Hammarström, S., Holmes, K.V., Karlsson, A., Kuroki, M., Lin, S.H., Lucka, L., Najjar, S.M., Neumaier, M., Obrink, B., Shively, J.E., Skubitz, K.M., Stanners, C.P., Thomas, P., Thompson, J.A., Virji, M., von Kleist, S., Wagener, C., Watt, S. and Zimmermann, W. 1999. Redefined nomenclature for members of the carcinoembryonic antigen family. *Exp. Cell Res.* 252: 243-249.

## CHROMOSOMAL LOCATION

Genetic locus: PSG9 (human) mapping to 19q13.31.

## SOURCE

PSG9 (C-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of PSG9 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-240794 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

PSG9 (C-15) is recommended for detection of PSG9 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); may cross-react with PSG6 or TBC1D9.

Suitable for use as control antibody for PSG9 siRNA (h): sc-97336, PSG9 shRNA Plasmid (h): sc-97336-SH and PSG9 shRNA (h) Lentiviral Particles: sc-97336-V.

Molecular Weight of PSG9: 48 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.