

# PSG1 (BAP3): sc-59348

## BACKGROUND

Pregnancy specific glycoprotein 1 (PSG1), also designated CD66f, 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-allootypic fetus from rejection. PSGs are commonly expressed in trophoblast tumors. Eleven human PSG proteins (PSG1-PSG11) have been described.

## REFERENCES

1. Bartels, I. and Lindemann, A. 1988. Maternal levels of pregnancy-specific  $\beta$ 1-glycoprotein (SP-1) are elevated in pregnancies affected by Down's syndrome. *Hum. Genet.* 80: 46-48.
2. Barnett, T.R., et al. 1989. Human pregnancy-specific  $\beta$ 1-glycoproteins are coded within chromosome 19. *Am. J. Hum. Genet.* 44: 890-893.
3. Niemann, S.C., et al. 1989. Pregnancy-specific  $\beta$  species specificity of one member of the PS  $\beta$  G family. *Hum. Genet.* 82: 239-243.
4. Lei, K.J., et al. 1992. Cloning and expression of genes encoding human pregnancy-specific glycoproteins. *J. Biol. Chem.* 267: 16371-16378.

## CHROMOSOMAL LOCATION

Genetic locus: PSG1 (human) mapping to 19q13.2.

## SOURCE

PSG1 (BAP3) is a mouse monoclonal antibody raised against purified CD66f of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PSG1 (BAP3) is available conjugated to agarose (sc-59348 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-59348 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-59348 PE), fluorescein (sc-59348 FITC), Alexa Fluor<sup>®</sup> 488 (sc-59348 AF488), Alexa Fluor<sup>®</sup> 546 (sc-59348 AF546), Alexa Fluor<sup>®</sup> 594 (sc-59348 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-59348 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-59348 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-59348 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## APPLICATIONS

PSG1 (BAP3) is recommended for detection of PSG1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1  $\mu$ g per 1 x 10<sup>6</sup> cells); non cross-reactive with C-CAM subgroup members of the CEA family.

Suitable for use as control antibody for PSG1 siRNA (h): sc-63362, PSG1 shRNA Plasmid (h): sc-63362-SH and PSG1 shRNA (h) Lentiviral Particles: sc-63362-V.

Molecular Weight of PSG1: 47 kDa.

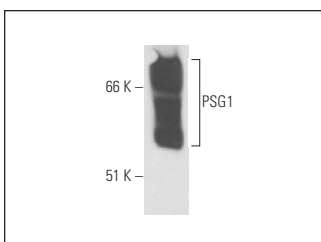
Molecular Weight of PSG1 isoforms: 54-72 kDa.

Positive Controls: human placenta extract: sc-363772.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 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 m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## DATA



PSG1 (BAP3): sc-59348. Western blot analysis of PSG1 expression in human placenta tissue extract.

## SELECT PRODUCT CITATIONS

1. Rana, V., et al. 2009. Activation of  $\beta$ -catenin signalling increases StarD7 gene expression in JEG-3 cells. *Placenta* 30: 876-883.
2. Rana, V., et al. 2011. StarD7 gene expression in trophoblast cells: contribution of SF-1 and Wnt- $\beta$ -catenin signaling. *Mol. Endocrinol.* 25: 1364-1375.
3. Moro, L., et al. 2016. Placental microparticles and microRNAs in pregnant women with *Plasmodium falciparum* or HIV infection. *PLoS ONE* 11: e0146361.

## RESEARCH USE

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