

PTAG (N-12): sc-86806

BACKGROUND

PTAG (pituitary tumor derived apoptosis gene), also known as RHBDD3 (rhomboid domain containing 3), is a novel 386 amino acid multi-pass membrane protein that contains one UBA domain and augments drug-induced apoptosis. Cells lacking PTAG have a reduced apoptotic response, thereby causing a predisposition to cell malignancy and resistance to chemotherapeutic interventions, and PTAG plays a role in colorectal tumorigenesis as the majority of primary colorectal tumors lack the PTAG gene. Encoded by a gene located on human chromosome 22, PTAG is often co-expressed with EWS (ewing sarcoma breakpoint region 1), a gene located directly downstream of PTAG.

REFERENCES

- Collins, J.E., Goward, M.E., Cole, C.G., Smink, L.J., Huckle, E.J., Knowles, S., Bye, J.M., Beare, D.M. and Dunham, I. 2003. Reevaluating human gene annotation: a second-generation analysis of chromosome 22. *Genome Res.* 13: 27-36.
- Bahar, A., Simpson, D.J., Cutty, S.J., Bicknell, J.E., Hoban, P.R., Holley, S., Mourtada-Maarabouni, M., Williams, G.T., Clayton, R.N. and Farrell, W.E. 2004. Isolation and characterization of a novel pituitary tumor apoptosis gene. *Mol. Endocrinol.* 18: 1827-1839.
- Farrell, W.E. 2005. Epigenetic mechanisms of tumorigenesis. *Horm. Metab. Res.* 37: 361-368.
- Farrell, W.E. 2006. A novel apoptosis gene identified in the pituitary gland. *Neuroendocrinology* 84: 217-221.
- Bahar, A., Whitby, P., Holley, S., Hoban, P.R., Elder, J.B., Deakin, M., Hall, C., Clayton, R.N., Williams, G.T. and Farrell, W.E. 2007. Primary colorectal tumors fail to express the proapoptotic mediator PTAG and its reexpression augments drug-induced apoptosis. *Genes Chromosomes Cancer* 46: 202-212.
- Möller, E., Mandahl, N., Iliszko, M., Mertens, F. and Panagopoulos, I. 2009. Bidirectionality and transcriptional activity of the EWSR1 promoter region. *Oncol. Rep.* 21: 641-648.

CHROMOSOMAL LOCATION

Genetic locus: RHBDD3 (human) mapping to 22q12.2; Rhbdd3 (mouse) mapping to 11 A1.

SOURCE

PTAG (N-12) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of PTAG of human origin.

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 or our catalog for detailed protocols and support products.

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-86806 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PTAG (N-12) is recommended for detection of PTAG 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)], 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).

PTAG (N-12) is also recommended for detection of PTAG in additional species, including equine, canine and porcine.

Suitable for use as control antibody for PTAG siRNA (h): sc-76284, PTAG siRNA (m): sc-152569, PTAG shRNA Plasmid (h): sc-76284-SH, PTAG shRNA Plasmid (m): sc-152569-SH, PTAG shRNA (h) Lentiviral Particles: sc-76284-V and PTAG shRNA (m) Lentiviral Particles: sc-152569-V.

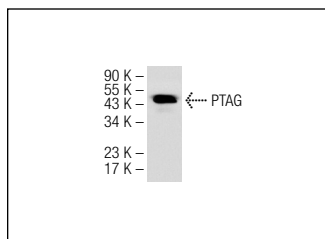
Molecular Weight of PTAG: 41 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

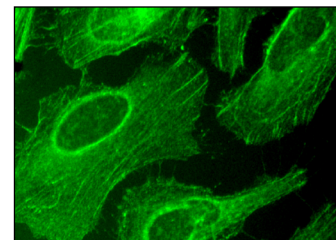
RECOMMENDED SECONDARY REAGENTS

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

DATA



PTAG (N-12): sc-86806. Western blot analysis of PTAG expression in HeLa whole cell lysate.



PTAG (N-12): sc-86806. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane and cytoplasmic localization.

RESEARCH USE

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