

# AGR2 (Y-14): sc-54562

## BACKGROUND

AGR2 (anterior gradient protein 2), also known as AG2, GOB-4 or HAG-2, is a member of the anterior gradient homolog family. It is the human ortholog of XAG-2, the secreted *Xenopus laevis* anterior gradient protein. In *X. laevis*, ARG2 is involved in cement gland differentiation and neural marker gene expression. AGR2 is a secretory protein encoded by two different AGR2 transcripts. It interacts with LYPD3 and  $\alpha$ -dystroglycan (DAG-1). AGR2 is ubiquitously expressed with upregulated expression in prostate cancer, breast cancer, lung cancer, renal carcinomas and endometrial carcinomas. AGR2 expression is positively correlated with that of the estrogen receptor (ER) and is negatively correlated with that of the epidermal growth factor receptor (EGFR). AGR2 may serve as a potential therapeutic marker for various cancers.

## REFERENCES

1. Huber, M., et al. 2004. Comparison of proteomic and genomic analyses of the human breast cancer cell line T47D and the antiestrogen-resistant derivative T47D-r. *Mol. Cell Proteomics* 3: 43-55.
2. Liu, D., et al. 2005. Human homologue of cement gland protein, a novel metastasis inducer associated with breast carcinomas. *Cancer Res.* 65: 3796-3805.
3. Zhang, J.S., et al. 2005. AGR2, an androgen-inducible secretory protein overexpressed in prostate cancer. *Genes Chromosomes Cancer* 43: 249-259.
4. Zheng, W., et al. 2006. Evaluation of AGR2 and AGR3 as candidate genes for inflammatory bowel disease. *Genes Immun.* 7: 11-18.
5. Zhu, H., et al. 2006. High resolution analysis of genomic aberrations by metaphase and array comparative genomic hybridization identifies candidate tumour genes in lung cancer cell lines. *Cancer Lett.* 245: 303-314.
6. Durand, G., et al. 2006. Detection of new methicillin-resistant *Staphylococcus aureus* clones containing the toxic shock syndrome toxin 1 gene responsible for hospital- and community-acquired infections in France. *J. Clin. Microbiol.* 44: 847-853.

## CHROMOSOMAL LOCATION

Genetic locus: AGR2 (human) mapping to 7p21.1; Agr2 (mouse) mapping to 12 A3.

## SOURCE

AGR2 (Y-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of AGR2 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-54562 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## RESEARCH USE

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

## APPLICATIONS

AGR2 (Y-14) is recommended for detection of AGR2 of mouse, rat and 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

AGR2 (Y-14) is also recommended for detection of AGR2 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for AGR2 siRNA (h): sc-61956, AGR2 siRNA (m): sc-61957, AGR2 shRNA Plasmid (h): sc-61956-SH, AGR2 shRNA Plasmid (m): sc-61957-SH, AGR2 shRNA (h) Lentiviral Particles: sc-61956-V and AGR2 shRNA (m) Lentiviral Particles: sc-61957-V.

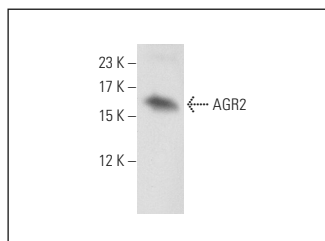
Molecular Weight of AGR2: 18-21 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206.

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

## DATA



AGR2 (Y-14): sc-54562. Western blot analysis of AGR2 expression in MCF7 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.

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Try **AGR2/3 (C-7): sc-376653** or **AGR2 (6C5): sc-101211**, our highly recommended monoclonal alternatives to AGR2 (Y-14).