## 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, it 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 up-regulated 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

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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.
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8. Innes, H.E., et al. 2006. Significance of the metastasis-inducing protein AGR2 for outcome in hormonally treated breast cancer patients. Br. J. Cancer 94: 1057-1065.
9. Zhang, Y., et al. 2007. Increased expression of anterior gradient-2 is significantly associated with poor survival of prostate cancer patients. Prostate Cancer Prostatic Dis. 10: 293-300.

## CHROMOSOMAL LOCATIONS

Genetic locus: AGR2/AGR3 (human) mapping to 7p21.1; Agr2/Agr3 (mouse) mapping to 12 A 3 .

## SOURCE

AGR2/3 (H-47) is a rabbit polyclonal antibody raised against amino acids 107-153 mapping within an internal region of AGR2 of human origin.

## PRODUCT

Each vial contains $200 \mu \mathrm{ggG}$ in 1.0 ml of PBS with $<0.1 \%$ sodium azide and $0.1 \%$ gelatin.

## APPLICATIONS

AGR2/3 (H-47) is recommended for detection of AGR2 and AGR3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [ $1-2 \mu \mathrm{~g}$ per 100-500 $\mu \mathrm{g}$ 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).

AGR2/3 (H-47) is also recommended for detection of AGR2 and AGR3 in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of AGR2/3: 18-21 kDa.

## 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 MarkerTM ${ }^{\text {TM }}$ compatible goat antirabbit 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 $/ 2.0 \mathrm{ml}$ ). 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.

## STORAGE

Store at $4^{\circ} \mathrm{C},{ }^{* *}$ 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 or our catalog for detailed protocols and support products.

Try AGR2/3 (C-7): sc-376653 or AGR2 (6C5): sc-101211, our highly recommended monoclonal alternatives to AGR2/3 (H-47).

