

CA215 (RP 215): sc-69849

BACKGROUND

In our normal healthy immune system, immunoglobulins are expressed by B cells. However in some cases, other cells have also been shown to be able to produce immunoglobulins, such as hyperblastic epithelial cells, and cancer cells. Cancer antigen 215 (CA215) has been shown to be human cancer cell-derived immunoglobulin present on cancer cell surfaces, and is considered a pan cancer marker. It is expressed in cancer cells of many different tissue origins in humans, and appears to be useful as biomarker in patients affected by various types of cancers, including ovarian, cervical, breast, lung, stomach, colon and esophagus.

REFERENCES

- Boerman, O., et al. 1989. Monoclonal antibodies against ovarian carcinoma-associated antigens, raised by immunization with cyst fluids. *Anticancer Res.* 9: 551-558.
- Hareuveni, M., et al. 1990. Vaccination against tumor cells expressing breast cancer epithelial tumor antigen. *Proc. Natl. Acad. Sci. USA* 87: 9498-9502.
- Lando, P.A., et al. 1993. Costimulation with B7 and targeted superantigen is required for MHC class II-independent T cell proliferation but not cytotoxicity. *Immunology* 80: 236-241.
- Lando, P.A., et al. 1996. Regulation of superantigen-induced T cell activation in the absence and the presence of MHC class II. *J. Immunol.* 157: 2857-2863.
- Newton, D.W., et al. 1998. MHC class II-independent, V β -specific activation of T cells by superantigen mutants fused to anti-tumor Fab fragments: implications for use in treatment of human colon carcinoma. *Int. J. Mol. Med.* 1: 157-162.
- Lindgren, S., et al. 1998. Chloramine-T in high-specific-activity radioiodination of antibodies using N-succinimidyl-3-(trimethylstannyl)benzoate as an intermediate. *Nucl. Med. Biol.* 25: 659-665.
- Li, B., et al. 2008. Glycoproteomic analyses of ovarian cancer cell lines and sera from ovarian cancer patients show distinct glycosylation changes in individual proteins. *J. Proteome Res.* 7: 3776-3788.
- Lee, G., et al. 2008. Molecular identity of a pan cancer marker, CA215. *Cancer Biol. Ther.* 7: 2007-2014.
- Russo, A., et al. 2009. Hereditary ovarian cancer. *Crit. Rev. Oncol. Hematol.* 69: 28-44.

SOURCE

CA215 (RP 215) is a mouse monoclonal antibody raised against ovarian cancer cell line OC-3 VGH 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.

PRODUCT

Each vial contains 200 μ g IgG $_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CA215 (RP 215) is available conjugated to agarose (sc-69849 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-69849 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-69849 PE), fluorescein (sc-69849 FITC), Alexa Fluor® 488 (sc-69849 AF488), Alexa Fluor® 546 (sc-69849 AF546), Alexa Fluor® 594 (sc-69849 AF594) or Alexa Fluor® 647 (sc-69849 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-69849 AF680) or Alexa Fluor® 790 (sc-69849 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

CA215 (RP 215) is recommended for detection of carbohydrate-associated epitope(s) in the heavy chains of cancer cell-expressed immunoglobulins, designated in general as CA215 pan cancer marker of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Molecular Weight of CA215: 36 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

SELECT PRODUCT CITATIONS

- Zhou, M.W., et al. 2010. Microsurgical anatomy of lumbosacral nerve rootlets for highly selective rhizotomy in chronic spinal cord injury. *Anat. Rec.* 293: 2123-2128.
- Cui, M., et al. 2020. Cancer-derived immunoglobulin G: a novel marker for differential diagnosis and relapse prediction in parathyroid carcinoma. *Clin. Endocrinol.* 92: 461-467.
- Wang, L.M., et al. 2021. Cancer-derived IgG involved in cisplatin resistance through PTP-BAS/Src/PDK1/Akt signaling pathway. *Oral Dis.* 27: 464-474.
- Wang, G., et al. 2021. Upregulated expression of cancer-derived immunoglobulin G is associated with progression in glioma. *Front. Oncol.* 11: 758856.

RESEARCH USE

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