

# C21orf99 (E-19): sc-83605

## BACKGROUND

C21orf99 (ANKRD30BP2), also known as Ankyrin repeat domain 30B pseudogene 2, CT85, CTSP1 or CTSP-1, is a 68 amino acid protein that, characteristic of CT (cancer/testis) antigens, displays a restricted expression pattern in normal tissues. Encoded by a gene that maps to human chromosome 21q11.2, C21orf99 is highly conserved and shares similarity to the 5 region of the breast differentiation antigen ANKRD30A gene. C21orf99 is predominantly expressed in testis and is also expressed in prostate, brain, placenta and trachea. C21orf99 is not expressed in lung, small intestine, breast, heart, uterus, bone marrow, fetal brain, colon, fetal liver, liver, thymus, salivary glands, spinal chord, kidney, spleen, muscle and adrenal gland. C21orf99 is suggested to produce humoral response in cancer patients due to its high expression in tumor cells.

## REFERENCES

1. Reymond, A., Camargo, A.A., Deutsch, S., Stevenson, B.J., Parmigiani, R.B., Ucla, C., Bettoni, F., Rossier, C., Lyle, R., Guipponi, M., de Souza, S., Iseli, C., Jongeneel, C.V., Bucher, P., Simpson, A.J. and Antonarakis, S.E. 2002. Nineteen additional unpredicted transcripts from human chromosome 21. *Genomics* 79: 824-832.
2. Parmigiani, R.B., Bettoni, F., Vbranovski, M.D., Lopes, M.H., Martins, W.K., Cunha, I.W., Soares, F.A., Simpson, A.J., de Souza, S.J. and Camargo, A.A. 2006. Characterization of a cancer/testis (CT) antigen gene family capable of eliciting humoral response in cancer patients. *Proc. Natl. Acad. Sci. USA* 103: 18066-18071.
3. Kim, H.N., Choi, D.W., Lee, K.T., Lee, J.K., Heo, J.S., Choi, S.H., Paik, S.W., Rhee, J.C. and Lowe, A.W. 2007. Gene expression profiling in lymph node-positive and lymph node-negative pancreatic cancer. *Pancreas*. 34: 325-334.
4. Rudchenko, S., Scanlan, M., Kalantarov, G., Yavelsky, V., Levy, C., Estabrook, A., Old, L., Chan, G.L., Lobel, L. and Trakht, I. 2008. A human monoclonal autoantibody to breast cancer identifies the PDZ domain containing protein GIPC1 as a novel breast cancer-associated antigen. *BMC Cancer*. 8: 248.
5. Parmigiani, R.B., Bettoni, F., Grosso, D.M., Lopes, A., Cunha, I.W., Soares, F.A., Carvalho, A.L., Fonseca, F. and Camargo, A.A. 2008. Antibodies against the cancer-testis antigen CTSP-1 are frequently found in prostate cancer patients and are an independent prognostic factor for biochemical-recurrence. *Int. J. Cancer*. 122: 2385-2390.
6. Caballero, O.L. and Chen, Y.T. 2009. Cancer/testis (CT) antigens: potential targets for immunotherapy. *Cancer Sci*. 100: 2014-2021.
7. Sarge, K.D., Xing, H. and Park-Sarge, O.K. 2009. Chromosome-wide analysis of protein binding and modifications. *Methods Mol. Biol.* 590: 223-233.
8. Ghafouri-Fard, S., Ousati Ashtiani, Z., Sabah Golian, B., Hasheminasab, S.M. and Modarressi, M.H. 2010. Expression of two testis-specific genes, SPATA19 and LEMD1, in prostate cancer. *Arch. Med. Res.* 41: 195-200.
9. Ghafouri-Fard, S., Abbasi, A., Moslehi, H., Faramarzi, N., Taba Taba Vakili, S., Mobasheri, M.B. and Modarressi, M.H. 2010. Elevated expression levels of testis-specific genes TEX101 and SPATA19 in basal cell carcinoma and their correlation with clinical and pathological features. *Br. J. Dermatol.* 162: 772-779.

## CHROMOSOMAL LOCATION

Genetic locus: ANKRD30BP2 (human) mapping to 21q11.2.

## SOURCE

C21orf99 (E-19) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of C21orf99 of human origin.

## 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-83605 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

C21orf99 (E-19) is recommended for detection of C21orf99 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Suitable for use as control antibody for C21orf99 siRNA (h): sc-91410, C21orf99 shRNA Plasmid (h): sc-91410-SH and C21orf99 shRNA (h) Lenti-viral Particles: sc-91410-V.

Molecular Weight of C21orf99: 23 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 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) 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° 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](http://www.scbt.com) or our catalog for detailed protocols and support products.