

GCFC1 (E-16): sc-83567

BACKGROUND

C21orf66, also known as GCFC (GC-rich sequence DNA-binding factor), is a 917 amino acid protein that localizes to the nucleus and belongs to the GCF family. Expressed ubiquitously, C21orf66 functions as a possible transcription factor and exists as four alternatively spliced isoforms, designated A, B, C and D. The gene encoding C21orf66 maps to human chromosome 21, which houses approximately 300 genes and comprises nearly 1.5% of the human genome. Chromosome 21-associated disorders include Alzheimer's Disease, amyotrophic lateral sclerosis and, most notably, Down Syndrome (also known as trisomy 21).

REFERENCES

- Müller, S., Stanyon, R., Finelli, P., Archidiacono, N. and Wienberg, J. 2000. Molecular cytogenetic dissection of human chromosomes 3 and 21 evolution. *Proc. Natl. Acad. Sci. USA* 97: 206-211.
- Mao, R., Wang, X., Spitznagel, E.L. Jr., Frelin, L.P., Ting, J.C., Ding, H., Kim, J.W., Ruczinski, I., Downey, T.J. and Pevsner, J. 2005. Primary and secondary transcriptional effects in the developing human Down syndrome brain and heart. *Genome Biol.* 6: R107.
- Robakis, N.K. 2006. The discovery and mapping to chromosome 21 of the Alzheimer's Amyloid gene: history revised. *J. Alzheimers Dis.* 10: 453-455.
- Ait Yahya-Graison, E., Aubert, J., Dauphinot, L., Rivals, I., Prieur, M., Golfier, G., Rossier, J., Personnaz, L., Creau, N., Blehaut, H., Robin, S., Delabar, J.M. and Potier, M.C. 2007. Classification of human chromosome 21 gene-expression variations in Down syndrome: impact on disease phenotypes. *Am. J. Hum. Genet.* 81: 475-491.
- Peterson, L.F., Boyapati, A., Ahn, E.Y., Biggs, J.R., Okumura, A.J., Lo, M.C., Yan, M. and Zhang, D.E. 2007. Acute myeloid leukemia with the 8q22;21q22 translocation: secondary mutational events and alternative t(8;21) transcripts. *Blood* 110: 799-805.
- Ryoo, S.R., Jeong, H.K., Radnaabazar, C., Yoo, J.J., Cho, H.J., Lee, H.W., Kim, I.S., Cheon, Y.H., Ahn, Y.S., Chung, S.H. and Song, W.J. 2007. DYRK1A-mediated Hyperphosphorylation of Tau: A functional link between Down syndrome and Alzheimer's disease. *J. Biol. Chem.* 282: 34850-34857.
- Figaro, S., Scrima, N., Buckingham, R.H. and Heurgue-Hamard, V. 2008. HemK2 protein, encoded on human chromosome 21, methylates translation termination factor eRF1. *FEBS Lett.* 582: 2352-2356.

CHROMOSOMAL LOCATION

Genetic locus: GCFC1 (human) mapping to 21q22.11.

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.

SOURCE

GCFC1 (E-16) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of GCFC1 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-83567 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

GCFC1 (E-16) is recommended for detection of GCFC1 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).

Suitable for use as control antibody for GCFC1 siRNA (h): sc-91440, GCFC1 shRNA Plasmid (h): sc-91440-SH and GCFC1 shRNA (h) Lentiviral Particles: sc-91440-V.

Molecular Weight of GCFC1: 105 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) 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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.