

CREG2 (A-14): sc-240254

BACKGROUND

The adenovirus E1A protein both activates and represses gene expression to promote cellular proliferation and inhibit differentiation. CREG (cellular repressor of E1A-stimulated genes) is a cellular protein that antagonizes transcriptional activation and cellular transformation by E1A. CREG was initially isolated in a yeast two-hybrid screen due to its interaction with the TATA-binding protein, TBP. A member of the CREG family, CREG2 (cellular repressor of E1A-stimulated genes 2) is a novel protein that shares 35% homology with CREG and is expressed at highest levels in brain. CREG2 is a secreted protein containing 290 amino acids whose N-terminus is thought to function as a signal sequence. The gene encoding CREG2 maps to human chromosome 2, which consists of 237 million bases, encodes over 1,400 genes and makes up approximately 8% of the human genome. A number of genetic diseases are linked to genes on chromosome 2 including Harlequin ichthyosis, sitosterolemia and Alström syndrome.

REFERENCES

1. Werner, U. and Haller, R. 1976. Fluoroalkyl substituted purine derivatives. *Arch. Pharm.* 309: 670-675.
2. Whyte, P., Williamson, N.M. and Harlow, E. 1989. Cellular targets for transformation by the adenovirus E1A proteins. *Cell* 56: 67-75.
3. Stein, R.W., Corrigan, M., Yaciuk, P., Whelan, J. and Moran, E. 1990. Analysis of E1A-mediated growth regulation functions: binding of the 300-kilodalton cellular product correlates with E1A enhancer repression function and DNA synthesis-inducing activity. *J. Virol.* 64: 4421-4427.
4. Veal, E., Groisman, R., Eisenstein, M. and Gill, G. 2000. The secreted glycoprotein CREG enhances differentiation of NTERA-2 human embryonal carcinoma cells. *Oncogene* 19: 2120-2128.
5. Shulenin, S., Schriml, L.M., Remaley, A.T., Fojo, S., Brewer, B., Allikmets, R. and Dean, M. 2001. An ATP-binding cassette gene (ABCG5) from the ABCG (White) gene subfamily maps to human chromosome 2p21 in the region of the Sitosterolemia locus. *Cytogenet. Cell Genet.* 92: 204-208.
6. Kunita, R., Otomo, A. and Ikeda, J.E. 2002. Identification and characterization of novel members of the CREG family, putative secreted glycoproteins expressed specifically in brain. *Genomics* 80: 456-460.
7. Hearn, T., Renforth, G.L., Spalluto, C., Hanley, N.A., Piper, K., Brickwood, S., White, C., Connolly, V., Taylor, J.F., Russell-Eggitt, I., Bonneau, D., Walker, M. and Wilson, D.I. 2002. Mutation of ALMS1, a large gene with a tandem repeat encoding 47 amino acids, causes Alström syndrome. *Nat. Genet.* 31: 79-83.
8. Kelsell, D.P., Norgett, E.E., Unsworth, H., Teh, M.T., Cullup, T., Mein, C.A., Dopping-Hepenstal, P.J., Dale, B.A., Tadini, G., Fleckman, P., Stephens, K.G., Sybert, V.P., Mallory, S.B., North, B.V., Witt, D.R., Sprecher, E., Taylor, A.E., Ilchyshyn, A., Kennedy, C.T., Goodyear, H., Moss, C., Paige, D., Harper, J.I., Young, B.D., Leigh, I.M., Eady, R.A. and O'Toole, E.A. 2005. Mutations in ABCA12 underlie the severe congenital skin disease harlequin ichthyosis. *Am. J. Hum. Genet.* 76: 794-803.

CHROMOSOMAL LOCATION

Genetic locus: CREG2 (human) mapping to 2q11.2; Creg2 (mouse) mapping to 1 B.

SOURCE

CREG2 (A-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of CREG2 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-240254 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CREG2 (A-14) is recommended for detection of CREG2 of mouse, rat and 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); non cross-reactive with CREG.

Suitable for use as control antibody for CREG2 siRNA (h): sc-94733, CREG2 siRNA (m): sc-142566, CREG2 shRNA Plasmid (h): sc-94733-SH, CREG2 shRNA Plasmid (m): sc-142566-SH, CREG2 shRNA (h) Lentiviral Particles: sc-94733-V and CREG2 shRNA (m) Lentiviral Particles: sc-142566-V.

Molecular Weight of CREG2: 32 kDa.

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) 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.

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 or our catalog for detailed protocols and support products.