SANTA CRUZ BIOTECHNOLOGY, INC.

CARF (V-19): sc-74910



BACKGROUND

CARF (calcium-response factor), also known as ALS2CR8 (amyotrophic lateral sclerosis 2 chromosomal region candidate gene 8 protein) or NYD-SP24, is a 725 amino acid nuclear protein. Expressed in a wide variety of tissues with highest expression in the hippocampus, CARF is thought to be a transcription factor that associates with the p53 tumor suppression pathway. CARF cooperates, co-localizes and is co-regulated with ARF, an ADP-ribosylation factor, and, through this interaction, helps to mediate ARF-p53-induced apoptotic signaling. This apoptotic pathway is implicated in cell cycle control, proper cellular development, response to DNA damage and the aging process, suggesting that CARF participates in various events throughout the cell. Mutations in the gene encoding CARF may by implicated in familial amyotrophic lateral sclerosis 2, a fatal neurodegenerative disease that is characterized by upper and lower motor neuron damage. Two isoforms of CARF exist due to alternative splicing events.

REFERENCES

- Hadano, S., Hand, C.K., Osuga, H., Yanagisawa, Y., Otomo, A., Devon, R.S., Miyamoto, N., Showguchi-Miyata, J., Okada, Y., Singaraja, R., Figlewicz, D.A., Kwiatkowski, T., Hosler, B.A., Sagie, T., Skaug, J., et al. 2001. A gene encoding a putative GTPase regulator is mutated in familial amyotrophic lateral sclerosis 2. Nat. Genet. 29: 166-173.
- Hasan, M.K., Yaguchi, T., Sugihara, T., Kumar, P.K., Taira, K., Reddel, R.R., Kaul, S.C. and Wadhwa, R. 2002. CARF is a novel protein that cooperates with mouse p19ARF (human p14ARF) in activating p53. J. Biol. Chem. 277: 37765-37770.
- Tao, X., West, A.E., Chen, W.G., Corfas, G. and Greenberg, M.E. 2002. A calcium-responsive transcription factor, CARF, that regulates neuronal activity-dependent expression of BDNF. Neuron 33: 383-395.
- 4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607586. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
- Kamrul, H.M., Wadhwa, R. and Kaul, S.C. 2007. CARF binds to three members (ARF, p53, and HDM2) of the p53 tumor-suppressor pathway. Ann. NY Acad. Sci. 1100: 312-315.
- 6. LocusLink Report (LocusID: 79800). http://www.ncbi.nlm.nih.gov/LocusLink/

CHROMOSOMAL LOCATION

Genetic locus: Carf (mouse) mapping to 1 C2.

SOURCE

CARF (V-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of CARF of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-74910 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CARF (V-19) is recommended for detection of CARF of mouse and rat 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 CARF siRNA (m): sc-72796, CARF shRNA Plasmid (m): sc-72796-SH and CARF shRNA (m) Lentiviral Particles: sc-72796-V.

Molecular Weight of CARF: 84 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 Lumin ol Reagent: sc-2048. 2) Immunofluo-rescence: 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.