# CARF (h3): 293T Lysate: sc-170745



The Power to Question

#### **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., Nasir, J., Brown, R.H., Scherer, S.W., et al. 2001. A gene encoding a putative GTPase regulator is mutated in familial amyotrophic lateral sclerosis 2. Nat. Genet. 29: 166-173.
- 2. 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.
- 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.

## CHROMOSOMAL LOCATION

Genetic locus: CARF (human) mapping to 2q33.2.

# **PRODUCT**

CARF (h3): 293T Lysate represents a lysate of human CARF transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

#### **STORAGE**

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

## **RESEARCH USE**

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

### **APPLICATIONS**

CARF (h3): 293T Lysate is suitable as a Western Blotting positive control for human reactive CARF antibodies. Recommended use: 10-20  $\mu$ l per lane.

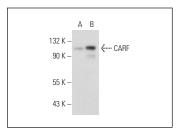
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

CARF (14.4): sc-101206 is recommended as a positive control antibody for Western Blot analysis of enhanced human CARF expression in CARF transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

## **RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-lgG $\kappa$  BP-HRP: sc-516102 or m-lgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>TM</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

#### DATA



CARF (14.4): sc-101206. Western blot analysis of CARF expression in non-transfected: sc-117752 (A) and human CARF transfected: sc-170745 (B) 293T whole cell Ivsates.

## **PROTOCOLS**

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

Santa Cruz Biotechnology, Inc. 1.800.457.3801 831.457.3800 fax 831.457.3801 Europe +00800 4573 8000 49 6221 4503 0 www.scbt.com