SANTA CRUZ BIOTECHNOLOGY, INC.

CART (3E4): sc-293241

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The CART gene encodes for a protein which has an important role in the regulation of appetite and body weight. The CART (cocaine and amphetamine regulated transcript) neuropeptide is an mRNA that changes in response to psychostimulant drug administration. Injection of CART peptides into the ventral tegmental area produces psychostimulant-like effects. CART localizes to areas of the central and peripheral nervous systems and is involved in feeding behavior when injected centrally. Expression of CART in the rat hypothalamus is modulated by nutritional status, and injection of synthetic CART peptide into the forebrain ventricular system suppresses food intake, indicating a possible role in hypothalamic control of energy homeostasis. Its identification in cell bodies and central terminals of vagal afferent neurons additionally suggests a role in brainstem mechanisms of meal termination and satiety.

REFERENCES

1. Dallvechia-Adams, S., Smith, Y. and Kuhar, M.J. 2001. CART peptide-immunoreactive projection from the nucleus accumbens targets substantia nigra pars reticulata neurons in the rat. J. Comp. Neurol. 434: 29-39.
2. Kuhar, M.J., Joyce, A. and Dominguez, G. 2001. Genes in drug abuse. Drug Alcohol Depend. 62: 157-162.
3. Barrett, P., Morris, M.A., Moar, K.M., Mercer, J.G., Davidson, J.A., Findlay, P.A., Adam, C.L. and Morgan, P.J. 2001. The differential regulation of CART gene expression in a pituitary cell line and primary cell cultures of ovine pars tuberalis cells. J. Neuroendocrinol. 13: 347-352.
4. Cowles, R.A., Segura, B.J. and Mulholland, M.W. 2001. Stimulation of rat pancreatic exocrine secretion by cocaine- and amphetamine-regulated transcript peptide. Regul. Pept. 99: 61-68.
5. Zheng, H., Patterson, C. and Berthoud, H.R. 2001. Fourth ventricular injection of CART peptide inhibits short-term sucrose intake in rats. Brain Res. 896: 153-156.

CHROMOSOMAL LOCATION

Genetic locus: CARTPT (human) mapping to 5q13.2; Cartpt (mouse) mapping to 13 D1.

SOURCE

CART (3E4) is a mouse monoclonal antibody raised against amino acids 1-116 representing full length CART of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

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.

APPLICATIONS

CART (3E4) is recommended for detection of CART 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CART siRNA (h): sc-43664, CART siRNA (m): sc-142013, CART shRNA Plasmid (h): sc-43664-SH, CART shRNA Plasmid (m): sc-142013-SH, CART shRNA (h) Lentiviral Particles: sc-43664-V and CART shRNA (m) Lentiviral Particles: sc-142013-V.

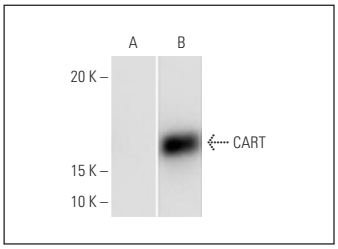
Molecular Weight of CART: 13 kDa.

Positive Controls: CART transfected 293T whole cell lysate.

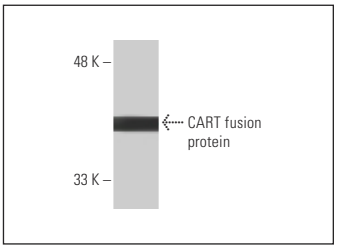
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



CART (3E4): sc-293241. Western blot analysis of CART expression in non-transfected (**A**) and CART transfected (**B**) 293T whole cell lysates.



CART (3E4): sc-293241. Western blot analysis of human recombinant CART fusion protein.

PROTOCOLS

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