SANTA CRUZ BIOTECHNOLOGY, INC.

proenkephalin A (218B2C): sc-517646

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The Power to Question

BACKGROUND

The proenkephalin precursor proteins are secreted proteins belonging to the opioid neuropeptide precursor family. The Proenkephalin proteins are proteolytically processed to form active secreted opioid peptides, which function as ligands for the κ-type of opioid receptor. The proenkephalin A precursor contains Synenkephalin, Leu-enkephalin and Met-enkephalin processed active peptides, while the proenkephalin B precursor contains β-neoendorphin, Dynorphin, Leumorphin, Leu-enkephalin and rimorphin processed active peptides. Proenkephalin A, also designated PENK, preproenkephalin or enkephalin A, is a 267 amino acid secreted protein containing an N-terminal domain which plays a role in disulfide bonding.

REFERENCES

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2. Notake, M., et al. 1983. Isolation and characterization of the mouse corticotropin-β-lipotropin precursor gene and a related pseudogene. FEBS. Lett. 156: 67-71.
3. Thorne, B.A., et al. 1989. Expression of mouse proopiomelanocortin in an Insulinoma cell line. Requirements for β-endorphin processing. J. Biol. Chem. 264: 3545-3552.
4. Smith, E.M., et al. 1990. Nucleotide and amino acid sequence of lymphocyte-derived corticotropin: endotoxin induction of a truncated peptide. Proc. Natl. Acad. Sci. USA 87: 1057-1060.
5. Lee, B.D., et al. 2005. Leumorphin has an anti-apoptotic effect by activating epidermal growth factor receptor kinase in rat pheochromocytoma PC12 cells. J. Neurochem. 95: 56-67.
6. Younes, A., et al. 2005. Ischemic preconditioning increases the bioavailability of cardiac enkephalins. Am. J. Physiol. Heart. Circ. Physiol. 289: H1652-H1661.
7. Lisi, T.L. and Sluka, K.A. 2005. A new electrochemical HPLC method for analysis of enkephalins and endomorphins. J. Neurosci. Methods 150: 74-79.
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CHROMOSOMAL LOCATION

Genetic locus: PENK (human) mapping to 8q12.1.

SOURCE

proenkephalin A (218B2C) is a mouse monoclonal antibody raised against recombinant proenkephalin A of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

proenkephalin A (218B2C) is recommended for detection of proenkephalin A of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000).

Suitable for use as control antibody for proenkephalin A siRNA (h): sc-45771, proenkephalin A shRNA Plasmid (h): sc-45771-SH and proenkephalin A shRNA (h) Lentiviral Particles: sc-45771-V.

Molecular Weight of proenkephalin A: 31 kDa.

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.

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 for detailed protocols and support products.