

# proenkephalin B (D-6): sc-398808

## 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  $\kappa$ -type of opioid receptor. The proenkephalin A precursor contains Synenkephalin, Leu-enkephalin and Met-enkephalin processed active peptides, while the proenkephalin B precursor contains  $\beta$ -neoendorphin, Dynorphin, Leumorphin, Leu-enkephalin and rimorphin processed active peptides.  $\beta$ -endorphin and Met-enkephalin are endogenous opiates, while ACTH is crucial for adrenal gland stimulation to release cortisol. MSH increases melanin production in melanocytes, which leads to an increase in skin pigmentation. Leumorphin may be important in apoptosis prevention by being involved in the MAP kinase and PI 3-kinase pathways.

## REFERENCES

1. Roberts, J.L., et al. 1979. Corticotropin and  $\beta$ -endorphin: construction and analysis of recombinant DNA complementary to mRNA for the common precursor. *Proc. Natl. Acad. Sci. USA* 76: 2153-2157.
2. Notake, M., et al. 1983. Isolation and characterization of the mouse corticotropin- $\beta$ -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  $\beta$ -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.

## CHROMOSOMAL LOCATION

Genetic locus: *Pdyn* (mouse) mapping to 2 F1.

## SOURCE

proenkephalin B (D-6) is a mouse monoclonal antibody raised against amino acids 1-248 representing full length proenkephalin B of mouse origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

proenkephalin B (D-6) is available conjugated to agarose (sc-398808 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398808 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398808 PE), fluorescein (sc-398808 FITC), Alexa Fluor<sup>®</sup> 488 (sc-398808 AF488), Alexa Fluor<sup>®</sup> 546 (sc-398808 AF546), Alexa Fluor<sup>®</sup> 594 (sc-398808 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-398808 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-398808 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-398808 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

proenkephalin B (D-6) is recommended for detection of proenkephalin B precursor and all processed active peptides of mouse and rat origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], 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 proenkephalin B siRNA (m): sc-72062, proenkephalin B shRNA Plasmid (m): sc-72062-SH and proenkephalin B shRNA (m) Lentiviral Particles: sc-72062-V.

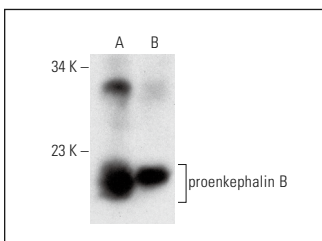
Molecular Weight of proenkephalin B: 28 kDa.

Positive Controls: 3611-RF whole cell lysate: sc-2215, rat pituitary tissue extract or mouse pituitary gland extract: sc-364246.

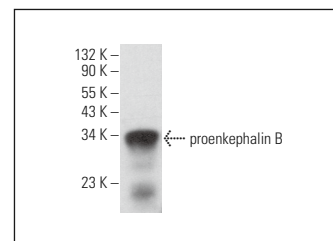
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> 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). 3) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## DATA



proenkephalin B (D-6): sc-398808. Western blot analysis of proenkephalin B expression in rat pituitary (A) and mouse pituitary gland (B) tissue extracts.



proenkephalin B (D-6): sc-398808. Western blot analysis of proenkephalin B expression in 3611-RF whole cell lysate.

## 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](http://www.scbt.com) for detailed protocols and support products.

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