



## Proenkephalin B (FL-254): sc-67043

### 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. Proenkephalin A precursor contains Synenkephalin, Leu-enkephalin and Met-enkephalin processed active peptides while the Proenkephalin B precursor contains  $\beta$ -neoendorphin, Dynorphin, Leuomorphin, Leu-enkephalin and rimorphin processed active peptides.  $\beta$ -endorphin and Met-enkephalin are endogenous opiates. Leuomorphin may be important for apoptosis prevention due to their involvement 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. Leuomorphin 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., et al. 2006. 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: PDYN (human) mapping to 20pter-p12; Pdyn (mouse) mapping to 2 F1.

### SOURCE

Proenkephalin B (FL-254) is a rabbit polyclonal antibody raised against amino acids 1-254 representing full length Proenkephalin B of human origin.

### PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

### APPLICATIONS

Proenkephalin B (FL-254) is recommended for detection of Proenkephalin B precursor and all processed active peptides of human origin by Western Blotting (starting dilution 1:200, 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); may cross-react with Proenkephalin A precursor .

Molecular Weight of Proenkephalin B: 28 kDa.

### RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (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](http://www.scbt.com) or our catalog for detailed protocols and support products.