

Met/Leu-enkephalin (NOC1/35): sc-47705

BACKGROUND

The corticotropin-lipotropin protein, also designated pro-opiomelanocortin, belongs to the POMC family of proteins. Specific cleavages by enzymes at certain basic paired residues yield various processed active peptides. The corticotropin-lipotropin protein contains synenkephalin, Leu-enkephalin, NPP, α -, β - and γ -melanotropin (MSH), adrenocorticotrophic hormone (ACTH), lipotropin β and γ , β -endorphin and Met-enkephalin processed active peptides. β -endorphin and Met-enkephalin are endogenous opiates while ACTH is crucial for adrenal gland stimulation to release cortisol. Met/Leu enkephalins also function in pain perception and response to stress. MSH increased 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-K and PI3-K pathways.

REFERENCES

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- 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.

CHROMOSOMAL LOCATION

Genetic locus: PENK (human) mapping to 8q12.1, POMC (human) mapping to 2p23.3; Penk (mouse) mapping to 4 A1, Pomc (mouse) mapping to 12 A1.1.

SOURCE

Met/Leu-enkephalin (NOC1/35) is a mouse monoclonal antibody raised against a synthetic peptide corresponding to Leu⁵ enkephalin of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Met/Leu-enkephalin (NOC1/35) is available conjugated to agarose (sc-47705 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-47705 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-47705 PE), fluorescein (sc-47705 FITC), Alexa Fluor® 488 (sc-47705 AF488), Alexa Fluor® 546 (sc-47705 AF546), Alexa Fluor® 594 (sc-47705 AF594) or Alexa Fluor® 647 (sc-47705 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-47705 AF680) or Alexa Fluor® 790 (sc-47705 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

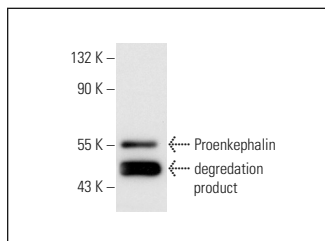
APPLICATIONS

Met/Leu-enkephalin (NOC1/35) is recommended for detection of Proenkephalin A and the processed active peptides Met-enkephalin and Leu-enkephalin of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

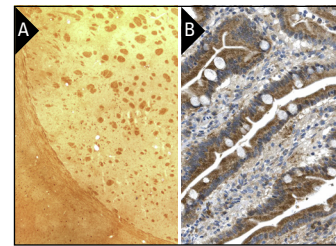
STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



Met/Leu-enkephalin (NOC1/35): sc-47705. Western blot analysis of human recombinant Proenkephalin.



Met/Leu-enkephalin (NOC1/35): sc-47705. Immunoperoxidase staining of formalin fixed, paraffin-embedded rat brain tissue showing Enkephalin positive cells in the Ventral Lateral Striatum. Image kindly provided by Regina Vontell, Adrienne Betz and John Salamone, University of Connecticut (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue showing cytoplasmic staining of glandular cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program (B).

SELECT PRODUCT CITATIONS

- Huang, W., et al. 2011. Structures and connections of enkephalin- and γ -aminobutyric acid-immunoreactive profiles in the gustatory region of the nucleus tractus solitarius: a light and electron microscopic study. *Neurosci. Sci.* 32: 53-58.
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RESEARCH USE

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

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