

motilin (H-9): sc-376605

BACKGROUND

Motilin, also known as MLN, is a 115 amino acid secreted peptide that is a cleavage product of the promotilin precursor, a protein that is proteolytically processed to yield motilin and motilin-associated peptide (MAP). Existing in the cells of the small intestine, motilin plays an important role in the rhythmic contraction of duodenal and colonic smooth muscle and is also involved in the regulation of interdigestive gastrointestinal motility. The gene encoding motilin maps to human chromosome 6, which contains 170 million base pairs and comprises nearly 6% of the human genome. Deletion of a portion of the q arm of chromosome 6 is associated with early onset intestinal cancer, suggesting the presence of a cancer susceptibility locus. Additionally, porphyria cutanea tarda, Parkinson's disease, Stickler syndrome and a susceptibility to bipolar disorder are all associated with genes that map to chromosome 6.

REFERENCES

- Seino, Y., et al. 1987. Sequence of an intestinal cDNA encoding human motilin precursor. *FEBS Lett.* 223: 74-76.
- Daikh, D.I., et al. 1989. Structure and expression of the human motilin gene. *DNA* 8: 615-621.
- Gasparini, P., et al. 1994. The motilin gene: subregional localisation, tissue expression, DNA polymorphisms and exclusion as a candidate gene for the HLA-associated immotile cilia syndrome. *Hum. Genet.* 94: 671-674.
- Feighner, S.D., et al. 1999. Receptor for motilin identified in the human gastrointestinal system. *Science* 284: 2184-2188.
- Wierup, N., et al. 2007. Ghrelin and motilin are cosecreted from a prominent endocrine cell population in the small intestine. *J. Clin. Endocrinol. Metab.* 92: 3573-3581.

CHROMOSOMAL LOCATION

Genetic locus: MLN (human) mapping to 6p21.31.

SOURCE

motilin (H-9) is a mouse monoclonal antibody raised against amino acids 1-115 representing full length motilin of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

motilin (H-9) is available conjugated to agarose (sc-376605 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376605 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376605 PE), fluorescein (sc-376605 FITC), Alexa Fluor[®] 488 (sc-376605 AF488), Alexa Fluor[®] 546 (sc-376605 AF546), Alexa Fluor[®] 594 (sc-376605 AF594) or Alexa Fluor[®] 647 (sc-376605 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-376605 AF680) or Alexa Fluor[®] 790 (sc-376605 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

motilin (H-9) is recommended for detection of motilin of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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 motilin siRNA (h): sc-75814, motilin shRNA Plasmid (h): sc-75814-SH and motilin shRNA (h) Lentiviral Particles: sc-75814-V.

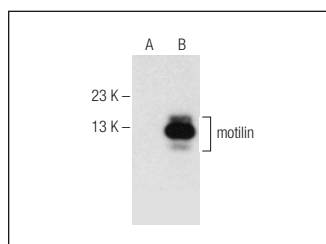
Molecular Weight of motilin: 13 kDa.

Positive Controls: human motilin transfected HEK293T whole cell lysate.

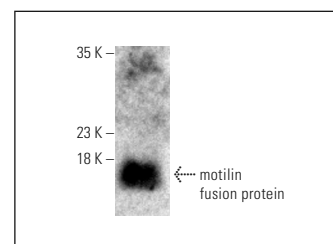
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BPHRP: sc-516102 or m-IgGκ BPHRP (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). 3) Immunofluorescence: use m-IgGκ BPFITC: sc-516140 or m-IgGκ BPE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



motilin (H-9): sc-376605. Western blot analysis of motilin expression in non-transfected (A) and human motilin transfected (B) HEK293T whole cell lysates.



motilin (H-9): sc-376605. Western blot analysis of human recombinant motilin fusion protein.

SELECT PRODUCT CITATIONS

- Múnera, J.O., et al. 2017. Differentiation of human pluripotent stem cells into colonic organoids via transient activation of BMP signaling. *Cell Stem Cell* 21: 51-64.e6.

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.