



# AGRP (H-5): sc-518077

## BACKGROUND

ASP (agouti signaling protein or agouti switch protein) is a paracrine signaling molecule that causes hair follicle melanocytes to synthesize pheomelanin, a yellow pigment, instead of the black or brown pigment eumelanin. Consequently, agouti mice produce hairs with a subapical yellow band on an otherwise black or brown background when expressed during the midportion of hair growth. ASP is a 132-amino acid protein with a consensus signal peptide, indicating that the protein is probably secreted and is normally expressed in neonatal skin. The gene which encodes for ASP maps to human chromosome 20q11.2. AGRP (agouti-related protein) is a potent, selective antagonist of MC3R and MC4R. AGRP normally regulates body weight via central melanocortin receptors, analogous to the relation between agouti and MC1R for regulation of pigmentation. AGRP is expressed primarily in the adrenal gland, subthalamic nucleus and hypothalamus, with a lower level of expression occurring in testis, lung and kidney. The gene which encodes for AGRP maps to human chromosome 16q22.1

## REFERENCES

1. Kwon, H.Y., et al. 1994. Molecular structure and chromosomal mapping of the human homolog of the agouti gene. *Proc. Natl. Acad. Sci. USA* 91: 9760-9764.
2. Ollmann, M.M., et al. 1997. Antagonism of central melanocortin receptors *in vitro* and *in vivo* by agouti-related protein. *Science* 278: 135-138.
3. Shutter, J.R., et al. 1997. Hypothalamic expression of ART, a novel gene related to agouti, is up-regulated in obese and diabetic mutant mice. *Genes Dev.* 11: 593-602.

## CHROMOSOMAL LOCATION

Genetic locus: AGRP (human) mapping to 16q22.1; Agrp (mouse) mapping to 8 D3.

## SOURCE

AGRP (H-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 64-90 within an internal region of AGRP of mouse origin.

## PRODUCT

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

AGRP (H-5) is available conjugated to agarose (sc-518077 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-518077 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-518077 PE), fluorescein (sc-518077 FITC), Alexa Fluor® 488 (sc-518077 AF488), Alexa Fluor® 546 (sc-518077 AF546), Alexa Fluor® 594 (sc-518077 AF594) or Alexa Fluor® 647 (sc-518077 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-518077 AF680) or Alexa Fluor® 790 (sc-518077 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## RESEARCH USE

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

## APPLICATIONS

AGRP (H-5) is recommended for detection of AGRP of mouse, rat and 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).

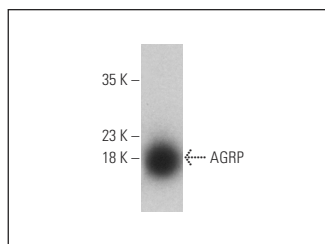
Suitable for use as control antibody for AGRP siRNA (h): sc-39287, AGRP siRNA (m): sc-39288, AGRP siRNA (r): sc-270205, AGRP shRNA Plasmid (h): sc-39287-SH, AGRP shRNA Plasmid (m): sc-39288-SH, AGRP shRNA Plasmid (r): sc-270205-SH, AGRP shRNA (h) Lentiviral Particles: sc-39287-V, AGRP shRNA (m) Lentiviral Particles: sc-39288-V and AGRP shRNA (r) Lentiviral Particles: sc-270205-V.

Molecular Weight of AGRP: 14 kDa.

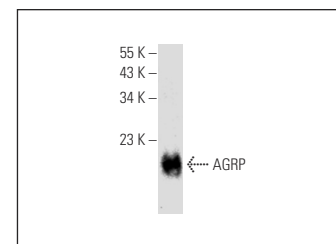
## RECOMMENDED SUPPORT REAGENTS

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



AGRP (H-5) HRP: sc-518077 HRP. Direct western blot analysis of mouse recombinant AGRP.



AGRP (H-5): sc-518077. Western blot analysis of mouse recombinant AGRP.

## SELECT PRODUCT CITATIONS

1. Liao, T., et al. 2020. Liraglutide lowers body weight set point in DIO rats and its relationship with hypothalamic microglia activation. *Obesity* 28: 122-131.
2. Zapata, R.C., et al. 2023. Nuclear receptor 5A2 regulation of Agrp underlies olanzapine-induced hyperphagia. *Mol. Psychiatry* 28: 1857-1867.
3. Du, T., et al. 2024. Chronic sleep deprivation disturbs energy balance modulated by suprachiasmatic nucleus efferents in mice. *BMC Biol.* 22: 296.

## STORAGE

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