SANTA CRUZ BIOTECHNOLOGY, INC.

AGRP (H-53): sc-50299

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.
4. Katsuki, A., et al. 2001. Plasma levels of agouti-related protein are increased in obese men. J. Clin. Endocrinol. Metab. 86: 1921-1924.
5. LocusLink Report (LocusID: 600201). http://www.ncbi.nlm.nih.gov/LocusLink

CHROMOSOMAL LOCATION

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

SOURCE

AGRP (H-53) is a rabbit polyclonal antibody raised against amino acids 51-103 mapping within an internal region of AGRP of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

AGRP (H-53) is recommended for detection of AGRP of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

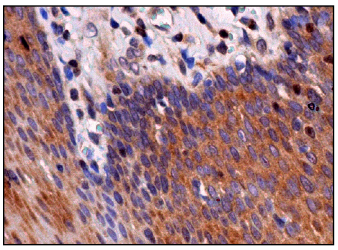
Suitable for use as control antibody for AGRP siRNA (h): sc-39287, AGRP siRNA (m): sc-39288, AGRP shRNA Plasmid (h): sc-39287-SH, AGRP shRNA Plasmid (m): sc-39288-SH, AGRP shRNA (h) Lentiviral Particles: sc-39287-V and AGRP shRNA (m) Lentiviral Particles: sc-39288-V.

Molecular Weight of AGRP: 14 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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



AGRP (H-53): sc-50299. Immunoperoxidase staining of formalin fixed, paraffin-embedded human esophagus tissue showing cytoplasmic staining of squamous epithelial cells.

SELECT PRODUCT CITATIONS

1. Milanski, M., et al. 2009. Saturated fatty acids produce an inflammatory response predominantly through the activation of TLR4 signaling in hypothalamus: implications for the pathogenesis of obesity. J. Neurosci. 29: 359-370.

RESEARCH USE

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