Human AgRP/ART Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF704

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human AgRP/ART in direct ELISAs and Western blots. In Western blots, approximately 40% cross-reactivity with recombinant mouse AgRP/ART is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	*S. frugiperda* insect ovarian cell line *Sf* 21-derived recombinant human AgRP/ART Ala21-Thr132 Accession # O00253
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

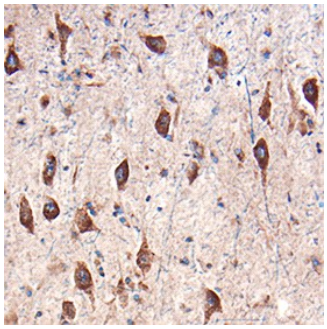
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	Recombinant Human AgRP/ART (Catalog # 704-AG)
Immunohistochemistry	5-15 µg/mL	See Below

DATA

Immunohistochemistry



AgRP/ART in Human Brain. AgRP/ART was detected in immersion fixed paraffin-embedded sections of human brain (hippocampus) using Goat Anti-Human AgRP/ART Antigen Affinity-purified Polyclonal Antibody (Catalog # AF704) at 15 µg/mL overnight at 4 °C. Before incubation with the primary antibody tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown ; Catalog # CTS008) and counterstained with hematoxylin (blue). Specific labeling was localized to the cytoplasm of neurons. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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BACKGROUND

Agouti-Related Protein (AgRP), the protein product of the Agouti-Related Transcript (ART), is a neuropeptide that regulates energy metabolism and the development of obesity by antagonizing α-melanocyte stimulating hormone (α-MSH) on MC-3 and MC-4 receptors (1 - 4). AgRP is predominantly expressed in the hypothalamus and adrenal medulla (5). Mature human AgRP is a 112 amino acid (aa) peptide; its C-terminal portion contains ten conserved cysteines that form five disulfide bonds (5, 6). Human AgRP shares 82% and 72% aa sequence identity with mouse and rat AgRP, respectively. It shares 32% aa sequence identity with Agouti. As in the case of Agouti, the C-terminal cysteine-rich region is sufficient for biological activity (7). AgRP is 100 times more potent than Agouti in antagonizing MC-3 and MC-4 receptors (8). AgRP also induces the β-arrestin dependent endocytosis of MC-3 and MC-4 (9). Hypothalamic expression of AgRP is upregulated in obesity and diabetes (5, 10), and chronic AgRP administration increases food intake and weight gain in rats (11). Genetically-linked polymorphisms of AgRP in humans are associated with susceptibility to anorexia nervosa (12, 13). In addition, AgRP inhibits the ACTH-induced synthesis of steroid hormones in a mechanism that does not involve melanocortin receptors (14).

References:

References

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