Human AgRP Protein (Fc Tag)

Catalog Number: **10070-H02H**

Sino Biological Inc.
Biological Solution Specialist

General Information

Gene Name Synonym:

AGRP, AGRT, ART, ASIP2, MGC118963

Protein Construction:

A DNA sequence encoding the human AgRP (NP_001129.1) (Met 1-Thr 132) was expressed with the fused Fc region of human IgG1 at the C-terminus.

Source: Human

Expression Host: Human Cells

QC Testing

Purity: > 97 % as determined by SDS-PAGE

Endotoxin:

< 1.0 EU per μg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 ℃

Predicted N terminal: Ala 21

Molecular Mass:

The recombinant human AgRP/Fc is a disulfide-linked homodimeric protein. The reduced monomer consists of 350 amino acids and predicts a molecular mass of 39 kDa also estimated by SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, pH 7.2

Normally 5 % - 8 % trehalose and mannitol are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

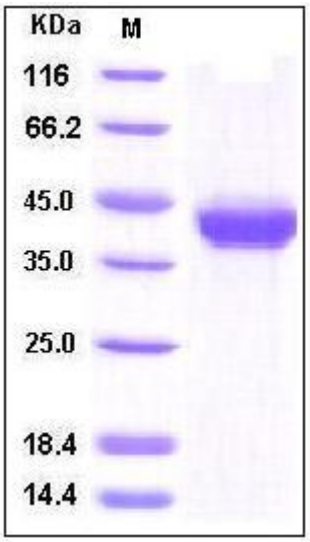
Usage Guide

Storage:

Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

SDS-PAGE:



Reconstitution:

Detailed reconstitutio the products.

Protein Description

Agouti-related protein or Agouti-related peptide (AgRP) is a neuropeptide predominantly produced in the brain (in the arcuate nucleus of the hypothalamus) by the AgRP/NPY neuron, and functions in the hypothalamic control of feeding behavior. As one of the most potent and long-lasting of appetite stimulators, AgRP increases appetite and decreases metabolism and energy expenditure, and thus regulates the development of obesity. AgRP has been identified as one of the two naturally occurring inverse agonists of melanocortin receptors, specifically MC3-R and MC4-R,which belongs to the G protein-coupled receptor (GPCR)family. This endogenous antagonist not only antagonizes the action of melanocortin agonists, such as α-melanocyte stimulating hormone (α-MSH), but also decreases the cAMP production by the affected cells and is involved in intracellular calcium regulation. Meanwhile, Agouti has been shown to regulate skin pigmentation by inhibiting MC1R signaling in melanocytes. In addition, the appetite stimulating effects of AgRP are inhibited by the hormone leptin secreted by adipocytes. Upregulated expression of AgRP is observed in obesity and diabetes, and genetically AgRP polymorphisms are associated with susceptibility to anorexia nervosa.

References

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2. Yang, Y. et al., 2003, Mol. Pharmacol. 64: 94-103.
3. Breit, A. et al., 2006, J. Biol. Chem. 281: 37447-37456.
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5. Graham, M. et al., 1997, Nat. Genet. 17: 273-274.
6. Shinyama, H. et al., 2003, Endocrinology. 144: 1301-1314.