Data Sheet (Cat.No.TMPY-01369)

TargetMol

AGRP Protein, Human, Recombinant (His)

General Information

Synonyms:	ASIP2;agouti related neuropeptide;AGRT;ART
Protein Construction:	A DNA sequence encoding the human AgRP (NP_001129.1) (Met 1-Thr 132) was expressed, with a polyhistidine tag at the C-terminus. Predicted N terminal: Ala 21
Species:	Human
Expression Host:	HEK293 Cells
Accession:	C6SUN5
Molecular Weight:	14 kDa (predicted); 16-19 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 90 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.2. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Agouti Related Protein (AGRP, or AGRT), is an endogenous antagonist of the melanocortin receptors MC3R and MC4R found in the hypothalamus and exhibits potent orexigenic activity. AGRP can act as a competitive antagonist to proopiomelanocortin (POMC)-derived peptides at the melanocortin-4 receptor (MC4R), and that this homeostatic mechanism is important as a means of coordinating appetite with perceived metabolic requirement. AGRP is upregulated by fasting while intracerebroventricular injections of synthetic AGRP lead to increased

appetite and food intake. Thus, AGRP is a powerful orexigenic peptide that increases food intake when ubiquitously overexpressed or when administered centrally.

Reference

Ilnytska O, et al. (2008) The role of the Agouti-Related Protein in energy balance regulation. Cell Mol Life Sci. 65 (17): 2721-31.

Pritchard LE, et al. (2005) Agouti-related protein: more than a melanocortin-4 receptor antagonist? Peptides. 26 (10): 1759-70.

Sttz AM, et al. (2005) The agouti-related protein and its role in energy homeostasis. Peptides. 26(10): 1771-81.

Millhauser GL, et al. (2003) Loops and links: structural insights into the remarkable function of the agouti-related protein. Ann N Y Acad Sci. 994: 27-35.