



## Nesfatin-1 Human E. coli

### Product Data Sheet

**Type:** Recombinant

**Source:** E. coli

**Species:** Human

**Other names:** Nucleobindin-2, DNA-binding protein NEFA,  
Gastric cancer antigen Zg4, NUCB2, NEFA

**Cat. No.:**

RD172227100 (0.1 mg)

### Description

Total 92 AA. MW: 10.79 kDa (calculated). N-Terminal His-tag, 10 extra AA (highlighted).

### Introduction to the Molecule

Nesfatin-1 is a polypeptide consisting of 82 amino acids with high level of homology in human, mouse and rat. Nesfatin-1 has been localized in the brain, particularly in the nuclei of the hypothalamus, in the adipose tissue, the gastrointestinal tract and in serum and cerebrospinal fluid. Nesfatin-1 is a satiety molecule affecting fat metabolism. Intracerebroventricular administration of nesfatin-1 decreases in food intake and body weight and increases in sympathetic nerve activity and mean arterial pressure. One product of Nesfatin-1 is leptin – independent, it is probably mediated by melanocortin system. Nesfatin-1 can be used to treat obesity, even in individuals with leptin resistance. Due to its presence in serum Nesfatin-1 could also serve as a clinical marker in the diagnosis of many diseases. The important role of nesfatin-1 in metabolism of glucose and insulin has been reported in several studies. Different concentrations were observed in patients with diabetes mellitus type I. and II. In individuals with DM type II. postprandial concentration of nesfatin-1 was significantly lower than that of DM type I. and healthy subjects. Different levels of Nesfatin-1 was measured in patients with anorexia nervosa and panic disorders in comparison with a control healthy group. Data obtained in experiments with rat models indicate that nesfatin-1 acts as a peripheral modulator of the cardiac function. Much higher levels of serum Nesfatin-1 (up to 160×) were detected in patients with primarily diagnosed epilepsy. During the treatment with anti-epileptics concentration of Nesfatin-1 decreased, but it was still about 10 times higher than the level of the hormone in healthy individuals. It offers the idea that it would be possible to use the Nesfatin-1 as a marker for diagnosis and monitoring of epilepsy.

### Research topic

Energy metabolism and body weight regulation, Neural tissue markers

### Amino Acid Sequence

**MKHHHHHHAS** VPIDIDKTKV QNIHPVESAK IEPDPTGLYY DEYLKQVIDV LETDKHFREK LQKADIEEIK SGRLSKELDL  
VSHHVRTKLD EL

### Source

E. coli

## SDS-PAGE gel



14% SDS-PAGE separation of Human Nesfatin

1. M.W. marker - 14, 21, 31, 45, 66, 97 kDa

2. reduced and heated sample, 5µg/lane

3. non-reduced and non-heated sample, 5µg/lane

## Formulation

Filtered (0,4 µm) and lyophilized in 0.5 mg/mL in 20mM TRIS, 50mM NaCl, pH 7.5

## Reconstitution

Add deionized water to prepare a working stock solution of approximately 0.5 mg/mL and let the lyophilized pellet dissolve completely. Product is not sterile! Please filter the product by an appropriate sterile filter before using it in the cell culture.

## Shipping

At ambient temperature. Upon receipt, store the product at the temperature recommended below.

## Storage, Stability/Shelf Life

Store lyophilized protein at -20°C. Lyophilized protein remains stable until the expiry date when stored at -20°C. Aliquot reconstituted protein to avoid repeated freezing/thawing cycles and store at -80°C for long term storage. Reconstituted protein can be stored at 4°C for a limited period of time; it does not show any change after one week at 4°C.

## Quality Control Test

BCA to determine quantity of the protein.

SDS PAGE to determine purity of the protein.

## Applications

Western blotting

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