

#### DESCRIPTION

|                           |                                                                                                                                                                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Mouse/Rat                                                                                                                                                                                                                                                                   |
| <b>Specificity</b>        | Detects rat Nesfatin-1/Nucleobindin-2 in direct ELISAs and mouse and rat Nesfatin-1/Nucleobindin-2 in Western blots. In direct ELISAs, approximately 7% cross-reactivity with recombinant human Nesfatin-1/Nucleobindin-2 is observed.                                      |
| <b>Source</b>             | Polyclonal Sheep IgG                                                                                                                                                                                                                                                        |
| <b>Purification</b>       | Antigen Affinity-purified                                                                                                                                                                                                                                                   |
| <b>Immunogen</b>          | <i>E. coli</i> -derived recombinant rat Nesfatin-1/Nucleobindin-2<br>Pro26-Leu106<br>Accession # Q9JI85                                                                                                                                                                     |
| <b>Conjugate</b>          | Alexa Fluor 750<br>Excitation Wavelength: 749 nm<br>Emission Wavelength: 775 nm                                                                                                                                                                                             |
| <b>Formulation</b>        | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide<br><br>*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions. |

#### 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.

|                             |                                                                        |
|-----------------------------|------------------------------------------------------------------------|
| <b>Western Blot</b>         | Optimal dilution of this antibody should be experimentally determined. |
| <b>Immunohistochemistry</b> | Optimal dilution of this antibody should be experimentally determined. |

#### PREPARATION AND STORAGE

|                                |                                                                                                                   |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Shipping</b>                | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| <b>Stability &amp; Storage</b> | Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied                          |

#### BACKGROUND

Nesfatin-1 (NEFA Encoded Satiety and Fat-influencing protein 1) is a presumably secreted peptide derived from the translation product of the NUCB2 gene. Nesfatin-1 is associated with neurons involved in feeding (ARH and PVH), fluid intake (SON and PVH) and autonomic activity, in  $\beta$ -cells of the pancreas, endocrine cells in the stomach, and in adipocytes. Its presence peripherally has an anorexigenic effect. Mature rat Nesfatin-1 is 82 amino acids (aa) in length. Although it is 10 kDa in MW, its presence in SDS-PAGE is difficult to detect in biological fluids. It represents the N-terminal cleavage product of a 420 aa precursor termed NEFA/Nucleobindin-2/NUCB2. NUCB2 contains a signal sequence (aa 1-24), Nesfatin-1 (aa 25-106), a DNA-binding site (aa 171-223), and two EF-hand regions (aa 241-276 and 293-328). Full-length NUCB2 is 48-55 kDa in size, and may be present extracellularly. There is a potential for multiple cleavages that would generate Nesfatin-1, Nesfatin-2 (aa 109-187) and Nesfatin-3 (aa 190-420). A 25 kDa peptide that represents Nesfatin-1 and -2 has been reported. Rat Nesfatin-1 (aa 25-106) shares 97% and 84% aa identity with mouse and human Nesfatin-1, respectively.

#### PRODUCT SPECIFIC NOTICES

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