

## Recombinant Human NGB

**Cat. No.** NGB-229H    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b> | Total 151 AA. MW: 17 kDa (calculated). 150 AA of recombinant human Neuroglobin and one extra AA, N-terminal methionin (highlighted).                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Source</b>           | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Description</b>      | NGB is a member of the vertebrate globin family involved in cellular oxygen homeostasis. It is an intracellular hemoprotein expressed in the central and peripheral nervous system, cerebrospinal fluid, retina and endocrine tissues. Neuroglobin is a monomer that reversibly binds oxygen with an affinity higher than that of hemoglobin. It also increases oxygen availability to brain tissue and provides protection under hypoxic or ischemic conditions, potentially limiting brain damage. It is of ancient evolutionary origin, and is homologous to nerve globins of invertebrates. |
| <b>Form</b>             | Filtered (0, 4 µm) and lyophilized in 0.5 mg/mL in 0.05 M phosphate buffer, 0.1 M NaCl, Ph 7.2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Research topic</b>   | Energy metabolism and body weight regulation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Purity</b>           | >95%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Reconstitution</b>   | 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.                                                                                                                                                                                                                                                                                                                                  |

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|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Applications</b>             | ELISA; Western blotting                                                                                                                                                                                                                                                                                                                                          |
| <b>Quality Control Test</b>     | BCA to determine quantity of the protein; SDS PAGE to determine purity of the protein                                                                                                                                                                                                                                                                            |
| <b>Sequences of amino acids</b> | MERPEPELIR QSWRAVSRSP LEHGTVLFR LFALEPDLLP LFQYNCRQFS<br>SPEDCLSSPE FLDHIRKVML VIDAAVTNVE DLSSLEEYLA SLGRKHRAVG<br>VKLSSFSTVG ELLYMLEKC LGPAFTPATR AAWSQLYGAV VQAMSRGWDG E                                                                                                                                                                                       |
| <b>Storage</b>                  | 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. |

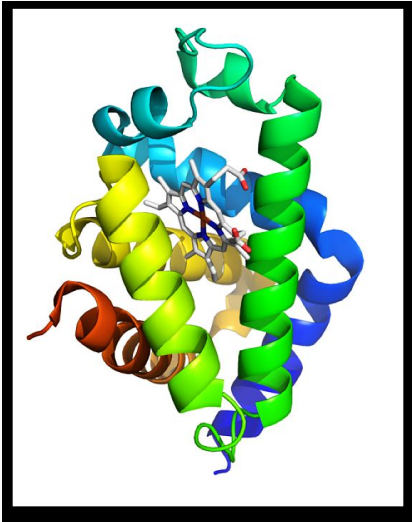
## GENE INFORMATION

|                        |                                  |
|------------------------|----------------------------------|
| <b>Gene Name</b>       | NGB neuroglobin [ Homo sapiens ] |
| <b>Official Symbol</b> | NGB                              |
| <b>Synonyms</b>        | NGB; neuroglobin                 |
| <b>Gene ID</b>         | 58157                            |
| <b>mRNA Refseq</b>     | NM_021257                        |
| <b>Protein Refseq</b>  | NP_067080                        |
| <b>MIM</b>             | 605304                           |

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|---------------------|-------------------------------------------------------------------------------------|
| UniProt ID          | Q9NPG2                                                                              |
| Chromosome Location | 14q24                                                                               |
| Function            | heme binding; metal ion binding; oxygen binding; oxygen transporter activity        |
| Neuroglobin         |  |