

## Neuroglobin Human E. coli Tag free

### Product Data Sheet

<b>Type:</b> Recombinant	<b>Cat. No.:</b>	
<b>Source:</b> E. coli	RD172043025	(0.025 mg)
<b>Species:</b> Human	RD172043100	(0.1 mg)
<b>Other names:</b> NGB		

### Description

Total 151 AA. MW: 17 kDa (calculated). UniProtKB acc.no. Q9NPG2. 150 AA of recombinant human Neuroglobin and one extra AA, N-terminal methionin (highlighted).

### Introduction to the Molecule

Neuroglobin, 151 amino acid residue protein, mainly expressed in vertebrate brain and retina, is a recently identified member of the globin superfamily. Augmenting O<sub>2</sub> supply, neuroglobin promotes survival of neurons upon hypoxic injury, potentially limiting brain damage. Moreover, neuroglobin may be a novel oxidative stress-responsive sensor for signal transduction in the brain. Neuroglobin expression is increased by neuronal hypoxia in vitro and focal cerebral ischemia in vivo, and neuronal survival after hypoxia is reduced by inhibiting neuroglobin expression with an antisense oligodeoxynucleotide and enhanced by neuroglobin overexpression

### Research topic

Neural tissue markers

### Amino Acid Sequence

**M**ERPEPELIR QSWRAVSRSP LEHGTVL~~F~~AR LFALEPDLLP LFQYNCRQFS SPEDCLSSPE FLDHIRKVML VIDAAVTNVE  
DLSSLEEYLA SLGRKRAVG VKLSSFSTVG ESLLYMLEKC LGPAFTPATR AAWSQLYGAV VQAMSRGWDG E

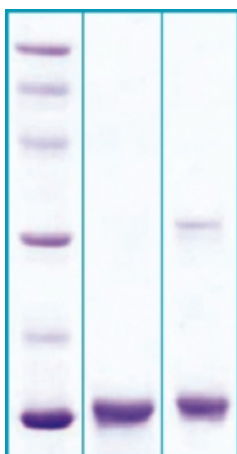
### Source

E. coli

### Purity

>95%

### SDS-PAGE gel



12% SDS-PAGE separation of Human Neuroglobin

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

### Endotoxin

< 1.0 EU/ug

### Formulation

Filtered (0,4 µm) and lyophilized in 0.5 mg/mL in 0.05 M phosphate buffer, 0.1 M NaCl, pH 7.2

## Reconstitution

Add deionized water to prepare a working stock solution of approximately 0.5 mg/mL and let the lyophilized pellet dissolve completely. Filter sterilize your culture media/working solutions containing this non-sterile product before using in cell culture.

## Shipping

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

## Storage, Stability/Shelf Life

Store lyophilized protein at -80°C. Lyophilized protein remains stable until the expiry date when stored at -80°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.  
LAL to determine quantity of endotoxin.

## Applications

ELISA, Western blotting

## Note

This product is intended for research use only.

## References to this Product

- Ostojic J, Grozdanic S, Syed NA, Hargrove MS, Trent JT 3rd, Kuehn MH, Kardon RH, Kwon YH, Sakaguchi DS. *Neuroglobin and cytoglobin distribution in the anterior eye segment: a comparative immunohistochemical study*. J Histochem Cytochem. 2008 Sep;56 (9):863-72
- Ostojic J, Sakaguchi DS, de Lathouder Y, Hargrove MS, Trent JT 3, Kwon YH, Kardon RH, Kuehn MH, Betts DM, Grozdanic S. *Neuroglobin and cytoglobin: oxygen-binding proteins in retinal neurons*. Invest Ophthalmol Vis Sci. Mar;47(3):1016-23 (2006)
- Ostojic J, Grozdanic SD, Syed NA, Hargrove MS, Trent JT 3rd, Kuehn MH, Kwon YH, Kardon RH, Sakaguchi DS. *Patterns of distribution of oxygen-binding globins, neuroglobin and cytoglobin in human retina*. Arch Ophthalmol. 2008 Nov;126 (11):1530-6

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