

neuroglobin (FL-151): sc-30144

BACKGROUND

Globins are a superfamily of gas-binding heme proteins that are present in bacteria, protists, fungi, plants and animals. Globins play evolutionarily divergent roles which include binding, transport, scavenging, detoxification and sensing of oxygen, nitric oxide and carbon monoxide. Neuroglobin (Ngb) is a hexacoordinate hemoglobin that is predominantly expressed in the vertebrate brain and may enhance oxygen supply to neural components. Neuroglobin displays a high affinity for oxygen and its presence in cerebral neurons suggests a role in neuronal responses to hypoxia or ischemia. For example, *in vitro* neuronal hypoxia causes an elevation in the levels of neuroglobin, which enhances neuronal cell survival. The human neuroglobin gene maps to chromosome 14q24.3 and encodes a 151 amino acid protein.

REFERENCES

- Burmester, T., et al. 2000. A vertebrate globin expressed in the brain. *Nature* 407: 520-523.
- Online Mendelian Inheritance in Man, OMIM[™]. 2000. Johns Hopkins University, Baltimore, MD. MIM Number: 605304. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: NGB (human) mapping to 14q24.3; Ngb (mouse) mapping to 12 D2.

SOURCE

neuroglobin (FL-151) is a rabbit polyclonal antibody raised against amino acids 1-151 representing full length neuroglobin of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

neuroglobin (FL-151) is recommended for detection of neuroglobin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

neuroglobin (FL-151) is also recommended for detection of neuroglobin in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for neuroglobin siRNA (h): sc-42081, neuroglobin siRNA (m): sc-42082, neuroglobin shRNA Plasmid (h): sc-42081-SH, neuroglobin shRNA Plasmid (m): sc-42082-SH, neuroglobin shRNA (h) Lentiviral Particles: sc-42081-V and neuroglobin shRNA (m) Lentiviral Particles: sc-42082-V.

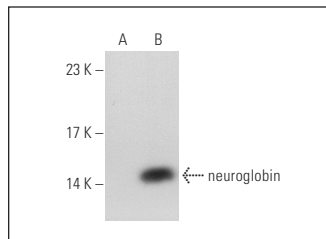
Molecular Weight of neuroglobin: 17 kDa.

Positive Controls: neuroglobin (h2): 293T Lysate: sc-115137.

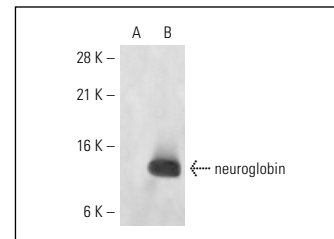
STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



neuroglobin (FL-151): sc-30144. Western blot analysis of neuroglobin expression in non-transfected: sc-117752 (A) and human neuroglobin transfected: sc-115137 (B) 293T whole cell lysates.



neuroglobin (FL-151): sc-30144. Western blot analysis of neuroglobin expression in non-transfected: sc-110760 (A) and human neuroglobin transfected: sc-110715 (B) whole cell lysates.

SELECT PRODUCT CITATIONS

- Khan, A.A., et al. 2007. A neuroglobin-overexpressing transgenic mouse. *Gene* 398: 172-176.
- Park, C.H., et al. 2011. Matrix metalloproteinase inhibitors attenuate neuroinflammation following focal cerebral ischemia in mice. *Korean J. Physiol. Pharmacol.* 15: 115-122.
- Jayaraman, T., et al. 2011. 14-3-3 binding and phosphorylation of neuroglobin during hypoxia modulate six-to-five heme pocket coordination and rate of nitrite reduction to nitric oxide. *J. Biol. Chem.* 286: 42679-42689.
- Watanabe, S., et al. 2012. Human neuroglobin functions as an oxidative stress-responsive sensor for neuroprotection. *J. Biol. Chem.* 287: 30128-30138.
- Fiocchetti, M., et al. 2015. ERβ-dependent neuroglobin up-regulation impairs 17β-estradiol-induced apoptosis in DLD-1 colon cancer cells upon oxidative stress injury. *J. Steroid Biochem. Mol. Biol.* 149C: 128-137.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



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Try **neuroglobin (G-11): sc-133086**, our highly recommended monoclonal alternative to neuroglobin (FL-151).