

DESCRIPTION

Source Mouse myeloma cell line, NS0-derived
Cys25-Ala423, with a C-terminal 6-His tag
Accession # Q8K0S5

N-terminal Sequence Analysis Cys25

Predicted Molecular Mass 46 kDa

SPECIFICATIONS

SDS-PAGE 61-69 kDa, reducing conditions

Activity Measured by its binding ability in a functional ELISA.
When Recombinant Human APP695 is coated at 2 µg/mL (100 µL/well), the concentration of Recombinant Mouse NgR3/NgRH2 that produces 50% optimal binding response is 0.03-0.18 µg/mL.

Endotoxin Level <0.10 EU per 1 µg of the protein by the LAL method.

Purity >95%, by SDS-PAGE with silver staining.

Formulation Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution Reconstitute at 500 µg/mL in sterile PBS.

Shipping The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage **Use a manual defrost freezer and avoid repeated freeze-thaw cycles.**

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

NgR3/NgRH2 (also known as reticulon-4 receptor-Like 1), along with the related NgR1 and NgR2, is a member of the Nogo66 receptor (NgR) family. NgR proteins are expressed primarily by neurons in the central and peripheral mammalian nervous system. NgR proteins play an essential role in mediating axon growth inhibition induced by the structurally distinct proteins Nogo, myelin associated glycoprotein (MAG), and myelin oligodendrocyte glycoprotein (OMgp) (1, 2). These proteins belong to the family of myelin-associated inhibitors (MAIs). NgR proteins are composed of 8 leucine-rich repeats (LRRs) flanked by N-terminal and C-terminal leucine-rich capping domains and are attached at the cell surface by a C-terminal glycosylphosphatidylinositol (GPI) anchor (3). Because NgR proteins have no transmembrane domain, they must be associated with membrane proteins in order to transduce cell signaling (2). Both NGF R/TNFRSF16 (p75) and TROY/TNFRSF19 have been identified as NgR1-associated components (4, 5). Mouse NgR3 shares 88% and 96% amino acid sequence identity with human and rat NgR3 respectively. NgR1 and NgR3 serve as receptors for chondroitin sulfate proteoglycans (CSPGs) (6). CSPGs and MAIs are known to stabilize neuronal structure and influence the growth and guidance of developing neurons (7). Therefore, NgR proteins are part of a multicomponent receptor system implicated in pathways that limit neuronal growth and increase the structural stability of synapses.

References:

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2. Wang, K.C. *et al.* (2002) Nature 420:74.
3. Fournier, A.E. *et al.* (2001) Nature 409:341.
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5. Park, J. B. *et al.* (2005) Neuron 45:345.
6. Dickendesher, T.L. *et al.* (2012) Nat. Neurosci. 15:703.
7. Kantor, D.B. *et al.* (2004) Neuron 44:961.