Recombinant Human Ninjurin-2

Catalog Number: 9719-NJ

DESCRIPTION

Source	*E. coli*-derived Met1-Thr65, wtih a C-terminal 6-His tag Accession # Q9NZG7
N-terminal Sequence Analysis	Met1
Predicted Molecular Mass	8 kDa

SPECIFICATIONS

SDS-PAGE	8 kDa, reducing conditions
Activity	Bioassay data are not available.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE under reducing conditions and visualized by silver stain.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 250 µg/mL in PBS.
Shipping	The product is shipped at ambient temperature. 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.

DATA

Bioactivity not tested

The Innovator Series. R&D Systems proteins are almost always sold with a bioassay to indicate activity. However, we recognize that sometimes proteins might be novel, and their bioactivity may not be well understood. In addition, some researchers may wish to use polypeptides to make antibodies. To facilitate the advancement of new science, we now offer our Innovator Series of proteins.

BACKGROUND

Ninjurin-2 (nerve injury-induced protein 2) is a 20-22 kDa member of the Ninjurin family of transmembrane (TM) proteins (1). It is expressed by multiple cell types, including Schwann cells, myenteric plexus and sensory neurons, and lymphocytes and participates in intercellular homophilic binding (1). Human Ninjurin-2 is 142 amino acids (aa) in length. It has an unusual membrane orientation. There is a 65 aa N-terminal extracellular domain (ECD) (aa 1-65) that contains one phoshorylation site at Ser3, followed by a TM segment, a cytoplasmic region, a second TM segment and a C-terminal ECD (aa 128-142). One potential alternate start site exists 46 aa upstream of the standard form start site. Over aa 1-65, human Ninjurin-2 is 71% aa identical to mouse Ninjurin-2. Multiple studies have linked NINJ-2 gene polymorphism with ischemic stroke (2-4). In endothelia cells, NINJ-2 activates TLR4 signaling pathway and promote inflammation (5).

References:

1. Araki, T. and J. Milbrandt (2000) J. Neurosci. **20**:187.
2. Zhu, Y. *et al.* (2014) Thromb Thrombolysis. **38**:470.
3. Bis. JC. *et al.* (2014) PLoS One **9**:e99798.
4. Li, BH., *et al.* (2012) J Neurol Sci **316**:116.
5. Wang, J. *et al.* (2017) Cell Signal **35**:231.

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