

LRRN3 Protein, Human, Recombinant (His)

General Information

Synonyms:	NLRR3;FIGLER5;leucine rich repeat neuronal 3;NLRR-3
Protein Construction:	A DNA sequence encoding the human LRRN3 (AAH35133.1) extracellular domain (Met 1-Thr 628) was fused with a polyhistidine tag at the C-terminus. Predicted N terminal: Met 1
Species:	Human
Expression Host:	Baculovirus Insect Cells
Accession:	AAH35133.1
Molecular Weight:	70 kDa (predicted); 70 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 90 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing 20 mM Tris, 500 mM NaCl, pH 7.0, 10% gly. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:	A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.
Stability & Storage:	It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots. <small>Actual storage temperature shall be subject to the COA.</small>
Shipping:	In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Leucine-rich repeat neuronal protein 3, also known as neuronal leucine-rich repeat protein 3 (NLRR-3), is a member of the leucine-rich (LRR) family whose members have significant functions in neural development. Leucine-rich repeats are short sequence motifs present in some proteins with diverse functions and cellular locations. All proteins containing these repeats are thought to be involved in protein-protein interactions. The crystal structure of ribonuclease inhibitor protein has revealed that leucine-rich repeats correspond to β-α

structural units. These units are arranged so that they form a parallel β -sheet with one surface exposed to solvent so that the protein acquires an unusual, non-globular shape. These two features may be responsible for the protein-binding functions of proteins containing leucine-rich repeats. LRRN3 plays an important role in cerebellum postnatal development. In a unilateral cortical injury cerebral cortex, NLRR-3 mRNA increased in layers 2-3 which suggests that NLRR-3 may be an important component of the pathophysiological response to brain injury.

Reference

- Yang J, et al. (2011) Role of LRRN3 in the cerebellum postnatal development in rats. *Zhong Nan Da Xue Xue Bao Yi Xue Ban.* 36 (5): 424-9.
- Hutcheson HB, et al. (2004) Examination of NRCAM, LRRN3, KIAA0716, and LAMB1 as autism candidate genes. *BMC Med Genet.* 5: 12.
- Ishii N, et al. (1996) Increased expression of NLRR-3 mRNA after cortical brain injury in mouse. *Brain Res Mol Brain Res.* 40 (1): 148-52.

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