

PANP/C12orf53 Protein, Human, Recombinant (hFc)

General Information

Synonyms:	C12orf53;UNQ828/PRO1755;PILR α associated neural protein;PANP;leda-1;PILR alpha associated neural protein;LEDA1
Protein Construction:	A DNA sequence encoding the human C12orf53 (Q8IYJ0-1) (Met1-Pro178) was expressed, fused with the Fc region of human IgG1 at the C-terminus. Predicted N terminal: Ser 32
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q8IYJ0-1
Molecular Weight:	42.3 kDa (predicted); 53 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:	> 96 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/ μ g of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μ m filter, containing PBS, pH 7.4. 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.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

C12orf53 is mainly expressed in adult brain and cerebellum. It also can be detected in fetal brain and virtually no expression in spleen, heart, kidney, liver and dorsal ganglion relative to brain. C12orf53 acts as a ligand for PILRA in neural tissues, where it may be involved in immune regulation. Chromosome 12 encodes over 1,100 genes within 132 million bases. A number of skeletal deformities are linked to chromosome 12 including

hypochondrogenesis, achondrogenesis and Kniest dysplasia. Noonan syndrome, which includes heart and facial developmental defects among the primary symptoms, is caused by a mutant form of PTPN11 gene product, SH-PTP2. Chromosome 12 is also home to a homeobox gene cluster which encodes crucial transcription factors for morphogenesis, and the natural killer complex gene cluster encoding C-type lectin proteins which mediate the NK cell response to MHC class I interaction.

Reference

Strausberg RL, et al. (2002) Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences. *Proc Natl Acad Sci.* 99(26):16899-903.

Ota T, et al. (2004) Complete sequencing and characterization of 21,243 full-length human cDNAs. *Tissue Antigens. Nat Genet.* 36(1):40-5.

Kogure A, et al. (2011) PANP is a novel O-glycosylated PILR ligand expressed in neural tissues. *Biochem Biophys Res Commun.* 405(3):428-33.

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