# PRODUCT INFORMATION

## Contactin-5 Long Isoform (human, recombinant)

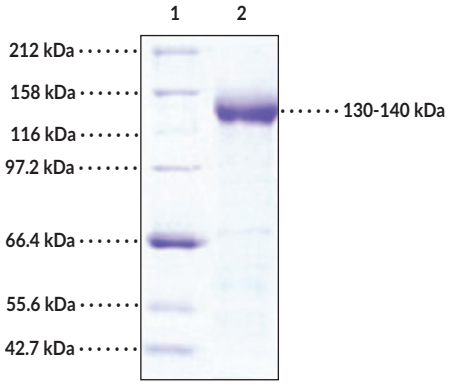
*Item No. 43689*

### Overview and Properties

| | |
|---|---|
| **Synonyms:** | CNTN5, hNB-2, Neural Recognition Molecule NB-2 |
| **Source:** | Recombinant human C-terminal His-tagged contactin-5 long isoform expressed in HEK293 cells |
| **Amino Acids:** | 16-1,059 |
| **Uniprot No.:** | O94779 |
| **Molecular Weight:** | 116 kDa |
| **Storage:** | -80°C (as supplied) |
| **Stability:** | ≥1 year |
| **Purity:** | ≥90% estimated by SDS-PAGE |
| **Supplied in:** | Lyophilized from sterile PBS, pH 7.4 |
| **Endotoxin Testing:** | <1.0 EU/µg, determined by the LAL endotoxin assay |
| **Bioactivity:** | See figure for details |

*Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.*

### Image




**Lane 1:** MW Markers
**Lane 2:** Contactin-5 Long Isoform

**SDS-PAGE Analysis of Contactin-5 Long Isoform.** This protein has a calculated molecular weight of 116 kDa, and a predicted N-terminus of Glu19 after signal peptide cleavage. It has an apparent molecular weight of approximately 130-140 kDa by SDS-PAGE under reducing conditions due to glycosylation.



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## Description

Contactin-5 is a neural cell adhesion molecule and member of the immunoglobulin (Ig) superfamily.[1] It is composed of six Ig-like repeats, four fibronectin type III-like domains, and a hydrophobic C-terminal sequence that contains a glycosylphosphatidylinositol (GPI) anchor site. Contactin-5 is primarily expressed in the occipital lobe, amygdala, cerebral cortex, frontal lobe, thalamus, and temporal lobe of the brain but is also expressed in the thyroid.[2] It is involved in neurodevelopment, arborization, and sensory terminal function and interacts with amyloid-β precursor-like protein 1 (APLP-1), protein tyrosine phosphatase γ (PTPγ), and contactin-associated protein-like 4 (CNTNAP4).[1,3] A SNP in *CNTN5*, the gene encoding contactin-5, is associated with increased risk and disease progression in patients with sporadic Alzheimer's disease.[2] Cayman's Contactin-5 Long Isoform (human, recombinant) protein consists of 1,052 amino acids, has a calculated molecular weight of 116 kDa, and a predicted N-terminus of Glu19 after signal peptide cleavage. By SDS-PAGE, under reducing conditions, the apparent molecular mass of the protein is 130-140 kDa due to glycosylation.

## References


1. Oguro-Ando, A., Zuko, A., Kleijer, K.T.E., *et al*. A current view on contactin-4, -5, and -6: Implications in neurodevelopmental disorders. *Mol. Cell. Neurosci.* **81**, 72-83 (2017).
2. Kamei, Y., Takeda, Y., Teramoto, K., *et al*. Human NB-2 of the contactin subgroup molecules: Chromosomal localization of the gene (CNTN5) and distinct expression pattern from other subgroup members. *Genomics* **69(1)**, 113-119 (2000).
3. Shimoda, Y. and Watanabe, K. Contactins: Emerging key roles in the development and function of the nervous system. *Cell Adh. Migr.* **3(1)**, 64-70 (2009).



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