

PRODUCT INFORMATION



Contactin-2 (human, recombinant)

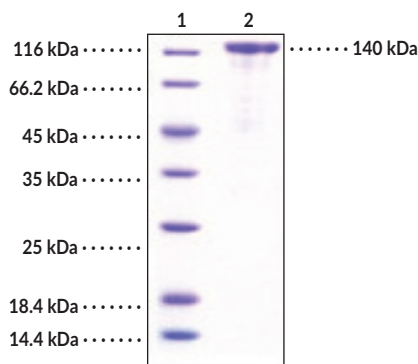
Item No. 43686

Overview and Properties

Synonyms:	Axonal Glycoprotein TAG-1, Axonin-1, CNTN2, TAG-1, TAX-1, Transient Axonal Glycoprotein 1
Source:	Recombinant human C-terminal His-tagged contactin-2 expressed in HEK293 cells
Amino Acids:	31-1,012
Uniprot No.:	Q02246
Molecular Weight:	109 kDa
Storage:	-80°C (as supplied)
Stability:	≥1 year
Purity:	≥95% estimated by SDS-PAGE
Supplied in:	Lyophilized from sterile 100 mM glycine, 10 mM sodium chloride, 50 mM Tris, pH 7.5
Endotoxin Testing:	<1.0 EU/μg, determined by the LAL endotoxin assay
Protein	
Concentration:	<i>batch specific</i> mg/ml

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

Image



Lane 1: MW Markers
Lane 2: Contactin-2

SDS-PAGE Analysis of Contactin-2. This protein has a calculated molecular weight of 109 kDa. It has an apparent molecular weight of approximately 140 kDa by SDS-PAGE under reducing conditions due to glycosylation.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
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Description

Contactin-2 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-2 localizes to the cell surface but also exists as a soluble form, which is produced *via* proteolytic cleavage by β -secretase 1 (BACE1).² It is transiently expressed in neurons during embryonic development and in the brain and spinal cord in adult tissues.^{1,3} It is involved in axonal growth, guidance, and fasciculation and myelinated fiber formation and maintenance.¹ Contactin-2 interacts with several partners, notably contactin-associated protein-like 2 (CASPR2) and juxtaparanodal potassium channels. Brain levels of contactin-2 are decreased in patients with Alzheimer's disease.² A frameshift mutation in the gene encoding contactin-2, *CNTN2*, is associated with epilepsy.⁴ Cayman's Contactin-2 (human, recombinant) protein consists of 993 amino acids, has a calculated molecular weight of 109 kDa, and a predicted N-terminus of Ser31 after signal peptide cleavage. By SDS-PAGE, under reducing conditions, the apparent molecular mass of the protein is 140 kDa due to glycosylation.

References

1. Masuda, T. Contactin-2/TAG-1, active on the front line for three decades. *Cell Adh. Migr.* **11**(5-6), 524-531 (2017).
2. Gautam, V., D'Avanzo, C., Hebisch, M., *et al.* BACE1 activity regulates cell surface contactin-2 levels. *Mol. Neurodegener.* **9**, 4 (2014).
3. 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).
4. Chen, W., Chen, F., Shen, Y., *et al.* Case report: A case of epileptic disorder associated with a novel *CNTN2* frameshift variant in homozygosity due to maternal uniparental disomy. *Front. Genet.* **12**, 743833 (2021).

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