

PRODUCT INFORMATION



CD171 Extracellular Domain (human, recombinant)

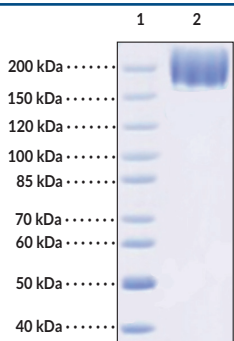
Item No. 44180

Overview and Properties

Synonyms:	CAML1, CD171, L1CAM, L1 Cell Adhesion Molecule, NCAML1, Neural Cell Adhesion Molecule L1
Source:	Recombinant human C-terminal His-tagged L1CAM expressed in HEK293 cells
Amino Acids:	20-1,120
Uniprot No.:	P32004
Molecular Weight:	125 kDa
Storage:	-80°C (as supplied)
Stability:	≥1 year
Purity:	≥85% 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
Protein Concentration:	<i>batch specific</i> mg/ml

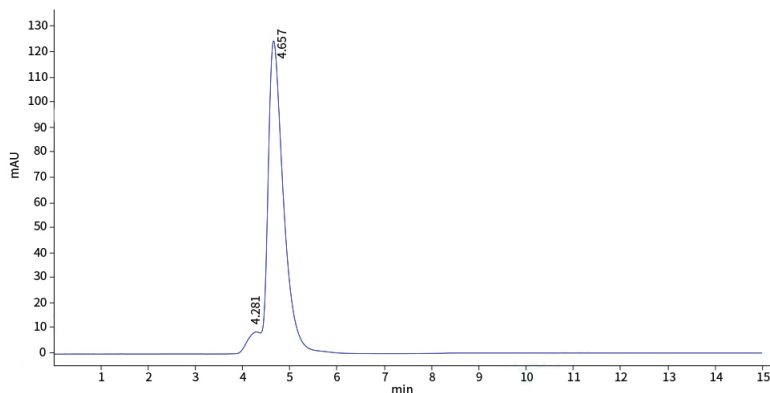
Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Images



Lane 1: MW Markers
Lane 2: L1CAM/CD171 Extracellular Domain

SDS-PAGE Analysis of L1CAM/CD171 Extracellular Domain. This protein has a calculated molecular weight of 125 kDa. It has an apparent molecular mass of approximately 160 to 200 kDa by SDS-PAGE under reducing conditions due to glycosylation.



Size Exclusion chromatography of purified L1CAM/CD171 Extracellular Domain (human, recombinant)

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
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 11/18/2025

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM

PRODUCT INFORMATION



Description

L1 cell adhesion molecule (L1CAM), also known as CD171, is a transmembrane glycoprotein and member of the L1 family of neural adhesion proteins.^{1,2} It is composed of six immunoglobulin (Ig) domains, five fibronectin type III-like domains, a transmembrane domain, and a short C-terminal domain.¹ L1CAM is found in central and peripheral neurons, oligodendrocytes, immune cells, and cancer cells.³ It can interact with other L1CAM receptors in a *cis* confirmation and bind receptors, such as reelin or integrins, on other cells in a *trans* confirmation.^{2,4} L1CAM is generally involved in cell-cell binding, neural signaling, and signal transduction through C-terminal interactions with ezrin and focal adhesion kinase (FAK).² The extracellular domain of L1CAM can be cleaved by serine proteases and promotes angiogenesis, invasion and metastasis, and cell survival and proliferation in tumors.⁵ The residual intracellular C-terminal fragment can be translocated to the nucleus where it promotes formation of neurite outgrowth and induces neuron migration.² Truncating or missense mutations in *L1CAM* are found in patients with L1 syndrome, a group of neonatal conditions characterized by intellectual disability, hydrocephaly, involuntary spasms, and adducted thumbs.⁴ Cayman's L1CAM/CD171 Extracellular Domain (human, recombinant) protein consists of 1,112 amino acids, has a calculated molecular weight of 125 kDa, and a predicted N-terminus of Ile20 after signal peptide cleavage. By SDS-PAGE, under reducing conditions, the apparent molecular mass of the protein is 160-200 kDa due to glycosylation.

References

1. Altevogt, P., Doberstein, K., and Fogel, M. L1CAM in human cancer. *Int. J. Cancer*. **138(7)**, 1565-1576 (2016).
2. Stoyanova, I.I. and Lutz, D. Functional diversity of neuronal cell adhesion and recognition molecule L1CAM through proteolytic cleavage. *Cells* **11(19)**, 3085 (2022).
3. Gomes, D.E. and Witwer, K.W. L1CAM-associated extracellular vesicles: A systematic review of nomenclature, sources, separation, and characterization. *J. Extracell. Biol.* **1(3)**, e35 (2022).
4. Zhang, L. CRASH syndrome: Does it teach us about neurotrophic functions of cell adhesion molecules? *Neuroscientist* **16(4)**, 470-474 (2010).
5. Kiefel, H., Bondong, S., Hazin, J., *et al.* L1CAM: A major driver for tumor cell invasion and motility. *Cell Adh. Migr.* **6(4)**, 374-384 (2012).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM