

L1CAM Protein, Human, Recombinant (His)

General Information

Synonyms:	N-CAM-L1;MASA;HSAS;L1 cell adhesion molecule;MIC5;N-CAML1;CD171;NCAM-L1;HSAS1;S10;CAML1;SPG1
Protein Construction:	A DNA sequence encoding the extracellular domain of human CD171 (NP_000416.1) (Met 1-Glu 1120) was fused with a polyhistidine tag at the C-terminus. Predicted N terminal: Ile 20
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P32004-1
Molecular Weight:	125 kDa (predicted); 160-200 kDa (reducing condition, due to glycosylation)

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:	> 85 % 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 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:	Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.
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

L1 cell adhesion molecule (L1CAM), also designated as CD171, is a cell adhesion receptor of the immunoglobulin superfamily, known for its roles in nerve cell function. While originally believed to be present only in brain cells, in recent years L1-CAM has been detected in other tissues, and a variety of cancer cells, including some common types of human cancer. L1CAM interacts with a variety of ligands including axonin-1, CD9, neurocan, and

integrins, and it has been revealed that the RGD motif in the sixth Ig domain of L1CAM is a binding site for integrins, thus important for nuclear signaling. Disruption of L1CAM function causes three X-linked neurological syndromes, i.e. hydrocephalus, MASA syndrome (mental retardation, aphasia, shuffling gait, and adducted thumbs), and spastic paraplegia syndrome. Overexpression of L1CAM in normal and cancer cells increased motility, enhanced growth rate, and promoted cell transformation and tumorigenicity. Recent work has identified L1CAM (CD171) as a novel marker for human carcinoma progression, and a candidate for anti-cancer therapy.

Reference

- Meier F, et al. (2006) The adhesion molecule L1 (CD171) promotes melanoma progression. *Int J Cancer*. 119(3): 549-55.
- Gavert N, et al. (2008) L1-CAM in cancerous tissues. *Expert Opin Biol Ther*. 8(11): 1749-57.
- Issa Y, et al. (2009) Enhanced L1CAM expression on pancreatic tumor endothelium mediates selective tumor cell transmigration. *J Mol Med*. 87(1): 99-112.
- Weidle UH, et al. (2009) L1-CAM as a target for treatment of cancer with monoclonal antibodies. *Anticancer Res*. 29(12): 4919-31.
- Raveh S, et al. (2009) L1 cell adhesion molecule (L1CAM) in invasive tumors. *Cancer Lett*. 282(2): 137-45.
- Wolterink S, et al. (2010) Therapeutic antibodies to human L1CAM: functional characterization and application in a mouse model for ovarian carcinoma. *Cancer Res*. 70(6): 2504-15.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

Tel: 781-999-4286 E_mail: info@targetmol.com Address: 34 Washington Street, Wellesley Hills, MA 02481