

## Technical Data Sheet

### Biotinylated Human CD171/L1CAM Protein (C-His-Avi)

**Catalog Number:** 805103, 805104

**Size:** 25 ug, 100 ug

**Target Name:** CD171, L1CAM

**Regulatory Status:** RUO

#### Product Details

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**Application:** ELISA, BLI

**Format:** Liquid, Biotinylated

**Expression Host:** CHO

**Species:** Human

**Sources:** Recombinant Human CD171/L1CAM protein (Ile20-Glu1120) with C-terminus His-Avi tag is expressed in CHO cells. This protein was site-specifically labeled with Biotin by BirA ligase.

**Accession Number:** P32004

**Molecular Weight:** The protein has a predicted molecular weight of 126.7 kDa. Under DTT-reducing conditions, it migrates at approximately 160-200 kDa on SDS-PAGE.

**Affinity Tag:** C-His-Avi

**Purity:** >95% based on SDS-PAGE under reducing condition

**Formulation:** 1xPBS buffer, pH7.4, 0.22 µm filtered

**Endotoxin level:** Not tested

**Protein Concentration:** 25µg size is bottled at 0.2mg/mL concentration. 100 µg size is supplied at a lot-specific concentration.

**Storage and Handling:** Briefly centrifuge the vial upon receipt. An unopened vial can be stored at 4°C for up to 2 weeks, or at -20°C or below for up to six months. The protein may be further diluted to 0.1 mg/mL using 0.22 µm-filtered PBS buffer (pH 7.4). For long-term storage, the diluted stock solution should be aliquoted and stored at ≤ -70°C to minimize freeze-thaw cycles. If additional dilution is required, carrier proteins such as FBS or BSA should be added to maintain protein stability.

#### Background Information

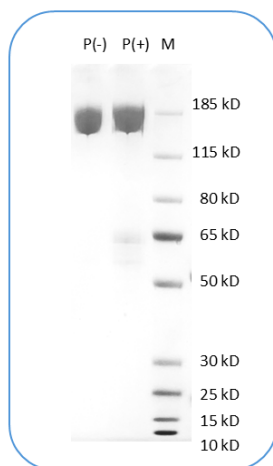
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CD171, also known as L1CAM or L1, is a 200–220 kD transmembrane glycoprotein and a member of the immunoglobulin superfamily, originally identified for its essential role in nervous system development. It mediates neuron-neuron adhesion, axon guidance, signal transduction, cell migration, and differentiation. Although initially thought to be restricted to neural tissue, L1CAM has since been detected in various non-neural tissues and numerous cancer types. Its expression in tumors is associated with increased cell motility, proliferation, treatment resistance, and poor prognosis, making it a promising target for anti-cancer therapy. Mutations in the L1CAM gene are responsible for the CRASH spectrum of X-linked neurological disorders, including corpus callosum hypoplasia, mental retardation, aphasia, spastic paraplegia, and hydrocephalus. L1CAM interacts with several ligands such as integrins, axonin-1, CD9, and neurocan, with the RGD motif in its sixth

Ig domain playing a key role in integrin binding and intracellular signaling.

## Product Data

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Human CD171 protein (C-His-Avi) was biotinylated in vitro using BirA ligase. SDS-PAGE analysis under reducing (P+) and non-reducing (P-) conditions shows the protein has a purity greater than 95%.