**Product datasheet**

**Anti-L1CAM antibody ab123990**

**Overview**

**Product name**  
Anti-L1CAM antibody

**Description**  
Rabbit polyclonal to L1CAM

**Host species**  
Rabbit

**Tested applications**  
Suitable for: WB, ICC/IF, IHC-P

**Species reactivity**  
Reacts with: Mouse

Predicted to work with: Human

**Immunogen**  
Synthetic peptide corresponding to Human L1CAM aa 1153-1182 (C terminal) conjugated to keyhole limpet haemocyanin.  
Database link: P32004

**Positive control**  
Mouse cerebellum tissue lysate. This antibody gave a positive result in IHC in the following FFPE tissue: Mouse brain. This antibody gave a positive result when used in the following formaldehyde fixed cell lines: SKNSH

**Properties**

**Form**  
Liquid

**Storage instructions**  
Shipped at 4°C. Store at 4°C (up to 6 months). Store at -20°C long term.

**Storage buffer**  
Preservative: 0.09% Sodium azide  
Constituent: 99% PBS

**Purity**  
Immunogen affinity purified

**Purification notes**  
ab123990 is purified through a protein A column, followed by peptide affinity purification.

**Clonality**  
Polyclonal

**Isotype**  
IgG

**Applications**

Our Abpromise guarantee covers the use of ab123990 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.
Function

Cell adhesion molecule with an important role in the development of the nervous system. Involved in neuron-neuron adhesion, neurite fasciculation, outgrowth of neurites, etc. Binds to axonin on neurons.

Involvement in disease

Defects in L1CAM are the cause of hydrocephalus due to stenosis of the aqueduct of Sylvius (HSAS) [MIM:307000]. Hydrocephalus is a condition in which abnormal accumulation of cerebrospinal fluid in the brain causes increased intracranial pressure inside the skull. This is usually due to blockage of cerebrospinal fluid outflow in the brain ventricles or in the subarachnoid space at the base of the brain. In children is typically characterized by enlargement of the head, prominence of the forehead, brain atrophy, mental deterioration, and convulsions. In adults the syndrome includes incontinence, imbalance, and dementia. HSAS is characterized by mental retardation and enlarged brain ventricles.

Defects in L1CAM are the cause of mental retardation-aphasia-shuffling gait-adducted thumbs syndrome (MASA) [MIM:303350]; also known as corpus callosum hypoplasia, psychomotor retardation, adducted thumbs, spastic paraparesis, and hydrocephalus or CRASH syndrome. MASA is an X-linked recessive syndrome with a highly variable clinical spectrum. Main clinical features include spasticity and hyperreflexia of lower limbs, shuffling gait, mental retardation, aphasia and adducted thumbs. The features of spasticity have been referred to as complicated spastic paraplegia type 1 (SPG1). Some patients manifest corpus callosum hypoplasia and hydrocephalus. Inter- and intrafamilial variability is very wide, such that patients with hydrocephalus, MASA, SPG1, and agenesis of corpus callosum can be present within the same family.

Defects in L1CAM are the cause of spastic paraplegia X-linked type 1 (SPG1) [MIM:303350]. Spastic paraplegia is a degenerative spinal cord disorder characterized by a slow, gradual, progressive weakness and spasticity of the lower limbs.

Note=Defects in L1CAM may contribute to Hirschsprung disease by modifying the effects of Hirschsprung disease-associated genes to cause intestinal aganglionosis.

Defects in L1CAM are a cause of partial agenesis of the corpus callosum (ACCPX) [MIM:304100]. A syndrome characterized by partial corpus callosum agenesis, hypoplasia of inferior vermis and cerebellum, mental retardation, seizures and spasticity. Other features include microcephaly, unusual facies, and Hirschsprung disease in some patients.

Sequence similarities

Belongs to the immunoglobulin superfamily. L1/neurofascin/NgCAM family.
Contains 5 fibronectin type-III domains.
Contains 6 Ig-like C2-type (immunoglobulin-like) domains.

Cellular localization

Cell membrane.

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>WB</td>
<td>1/100 - 1/500. Predicted molecular weight: 140 kDa.</td>
<td></td>
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<tr>
<td>ICC/IF</td>
<td>Use a concentration of 5 µg/ml.</td>
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<tr>
<td>IHC-P</td>
<td>Use a concentration of 1 µg/ml.</td>
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</table>
Anti-L1CAM antibody (ab123990) at 1/100 dilution + Mouse cerebellum tissue lysate at 35 µg

**Predicted band size:** 140 kDa

ICC/IF image of ab123990 stained SKNSH cells. The cells were 4% formaldehyde fixed (10 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody ab123990 at 5µg/ml overnight at +4°C. The secondary antibody (green) was DyLight® 488 goat anti-rabbit (ab96899) IgG (H+L) used at a 1/250 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.

IHC image of L1CAM staining in Mouse brain formalin fixed paraffin embedded tissue section, performed on a Leica Bond™ system using the standard protocol B. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab123990, 1µg/ml, for 15 mins at room temperature. A Goat anti-Rabbit biotinylated secondary antibody was used to detect the primary, and visualized using an HRP conjugated ABC system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.

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