

## Product datasheet

# Anti-Lingo1 antibody ab23631

★★★★☆ 2 Abreviews 14 References 7 Images

### Overview

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<b>Product name</b>	Anti-Lingo1 antibody
<b>Description</b>	Rabbit polyclonal to Lingo1
<b>Host species</b>	Rabbit
<b>Specificity</b>	Rabbit polyclonal to Lingo1 (ab23631) detects Lingo1 protein at ~83kDa in mouse and human brain lysates. This band is larger than predicted on Swiss Prot (69kDa; Q9D1T0) possibly due to post-translational modification and is consistent with published literature on Lingo1 protein detection in brain lysate. The strong band observed at ~ 17kDa in the mouse brain lysate (lane 1) corresponds to a cleavage fragment of Lingo1 (Swiss Prot IDs: Q3TQJ4)
<b>Tested applications</b>	<b>Suitable for:</b> WB, ICC/IF, IHC-Fr, IP, Functional Studies, IHC-FoFr
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Rat, Human <b>Predicted to work with:</b> Chicken
<b>Immunogen</b>	Synthetic peptide conjugated to KLH derived from within residues 600 to the C-terminus of Human Lingo1. Read Abcam's proprietary immunogen policy (Peptide available as <a href="#">ab25890</a> .)
<b>Positive control</b>	Mouse Brain, Brain (Mouse) Whole Cell Lysate - normal tissue, 0 days old ( <a href="#">ab7188</a> ) This antibody gave a positive result when used in the following formaldehyde fixed cell lines: SKNSH.

### Properties

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<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
<b>Storage buffer</b>	Preservative: 0.02% Sodium Azide Constituents: 1% BSA, PBS, pH 7.4
<b>Purity</b>	Immunogen affinity purified
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	IgG

### Applications

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Our [Abpromise guarantee](#) covers the use of **ab23631** in the following tested applications.

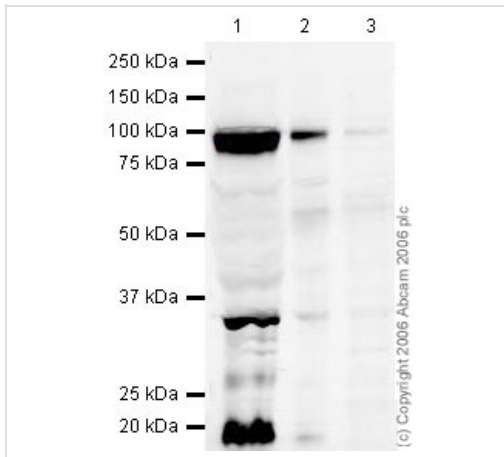
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB	★★★★☆	Use a concentration of 1 µg/ml. Detects a band of approximately 83 kDa (predicted molecular weight: 83 kDa).
ICC/IF		Use a concentration of 5 µg/ml.
IHC-Fr		1/500. PubMed: 20407577
IP		Use at an assay dependent concentration.
Functional Studies		Use at an assay dependent concentration. PubMed: 20573699
IHC-FoFr	★★★★☆	1/3000.

## Target

<b>Function</b>	Functional component of the Nogo receptor signaling complex (RTN4R/NGFR) in RhoA activation responsible for some inhibition of axonal regeneration by myelin-associated factors. Is also an important negative regulator of oligodentocyte differentiation and axonal myelination. Acts in conjunction with RTN4 and RTN4R in regulating neuronal precursor cell motility during cortical development.
<b>Tissue specificity</b>	Expressed exclusively in the central nervous system. Highest level in the in amygdala, hippocampus, thalamus and cerebral cortex. In the rest of the brain a basal expression seems to be always present. Up-regulated in substantia nigra neurons from Parkinson disease patients.
<b>Sequence similarities</b>	Contains 1 Ig-like C2-type (immunoglobulin-like) domain. Contains 11 LRR (leucine-rich) repeats. Contains 1 LRRCT domain. Contains 1 LRRNT domain.
<b>Post-translational modifications</b>	N-glycosylated. Contains predominantly high-mannose glycans.
<b>Cellular localization</b>	Cell membrane.

## Images



Western blot - Anti-Lingo1 antibody (ab23631)

**All lanes** : Anti-Lingo1 antibody (ab23631) at 1 µg/ml

**Lane 1** : Mouse brain

**Lane 2** : Mouse brain tissue lysate - total protein (0 days) (ab7188)

**Lane 3** : Human Brain Tissue Lysate

Lysates/proteins at 20 µg per lane.

### Secondary

**All lanes** : Rabbit IgG secondary antibody (ab28446) at 1/10000 dilution

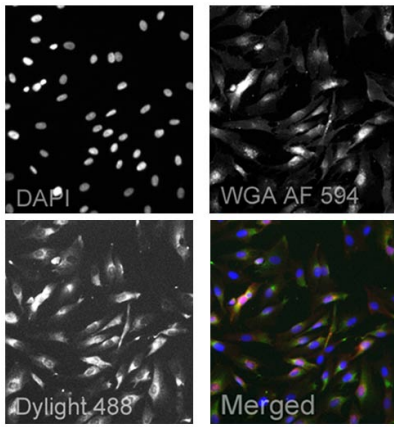
Performed under reducing conditions.

**Predicted band size:** 83 kDa

**Observed band size:** 83 kDa

**Additional bands at:** 17 kDa (possible cleavage fragment), 34 kDa (possible degradation product)

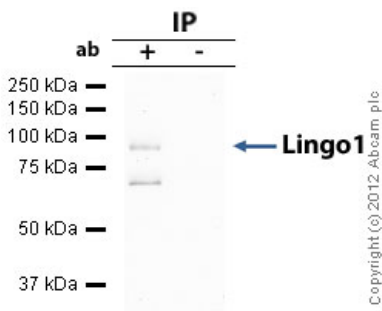
Rabbit polyclonal to Lingo1 (ab23631) detects Lingo1 protein at ~83kDa in mouse and human brain lysates. This band is larger than predicted on Swiss Prot (69kDa; Q9D1T0) possibly due to post-translational modifications and is consistent with published literature on Lingo1 protein detection in brain lysate. The strong band observed at ~17kDa in the mouse brain lysate (lane 1) corresponds to a cleavage fragment of Lingo1 (Swiss Prot IDs: Q3TQJ4)



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Immunocytochemistry/ Immunofluorescence - Anti-Lingo1 antibody (ab23631)

ICC/IF image of ab23631 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 ab23631 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.



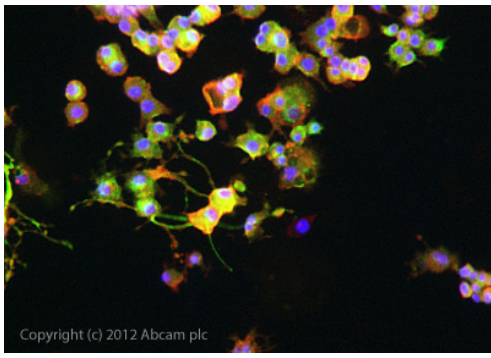
Immunoprecipitation - Anti-Lingo1 antibody (ab23631)

Lingo1 was immunoprecipitated using 0.5mg Mouse Brain whole tissue lysate, 5µg of Rabbit polyclonal to Lingo1 and 50µl of protein G magnetic beads (+). No antibody was added to the control (-).

The antibody was incubated under agitation with Protein G beads for 10min, Mouse Brain whole tissue lysate lysate diluted in RIPA buffer was added to each sample and incubated for a further 10min under agitation. Proteins were eluted by addition of 40µl SDS loading buffer and incubated for 10min at 70°C; 10µl of each sample was separated on a SDS PAGE gel, transferred to a nitrocellulose membrane, blocked with 5% BSA and probed with ab23631.

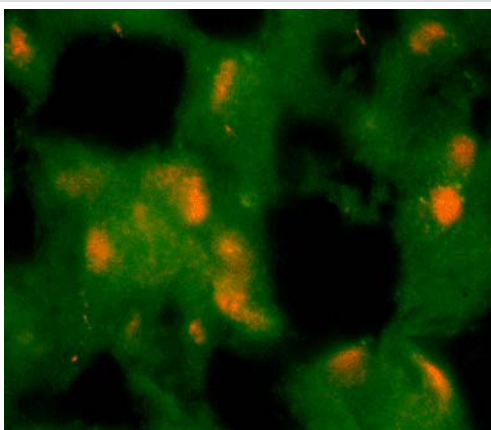
Secondary: Mouse monoclonal [SB62a] Secondary Antibody to Rabbit IgG light chain (HRP) (ab99697).

Band: 83kDa:Lingo1; non specific - 70kDa: We are unsure as to the identity of this extra band.



Immunocytochemistry/ Immunofluorescence - Anti-Lingo1 antibody (ab23631)

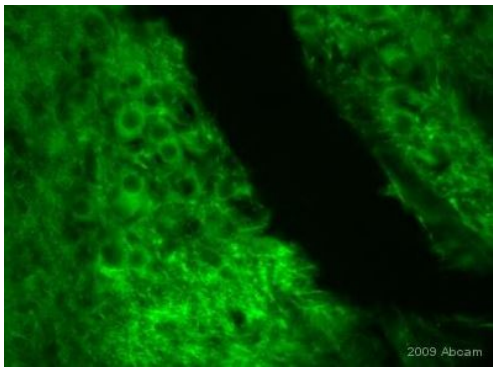
ICC/IF image of ab23631 stained PC12 cells. The cells were 4% formaldehyde fixed (10 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody ab23631 at 5µg/ml overnight at +4°C. The secondary antibody (green) was DyLight® 488 goat anti- rabbit (ab96899) IgG (H+L) used at a 1/1000 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.



Immunohistochemistry (Frozen sections) - Anti-Lingo1 antibody (ab23631)

Image from Chandrasekar V et al, Front Behav Neurosci. 2010 Apr 5;4:14, Fig 4.

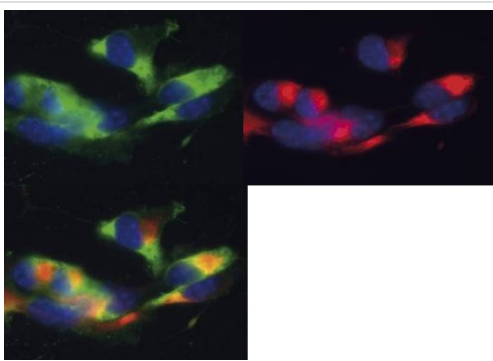
ab23631 staining Lingo1 in in rat brain tissue by Immunohistochemistry (Frozen sections). Rats were decapitated, brains were quickly removed and immediately frozen in isopentane (at -30°C for 3 minutes) and kept at -25°C. Coronal sections were cut at 14 µm in a cryostat and placed on gelatinized glass slides, air-dried at room temperature for 20 minutes and kept at -25°C until further processing. Brain sections were fixed for 10 minutes in cold acetone and washed three times in 1 × phosphate-buffered saline (PBS). Non-specific binding sites were blocked by incubating slices for 1 hour in 1 × PBS containing 1% bovine serum albumin, 1% Triton X-100 and 3% normal goat serum. Sections were then incubated overnight at 4°C with the primary antibody at a 1/500 dilution. The sections were then stained by 30 minutes incubation with Hoechst at a 1/1500 dilution.



Immunohistochemistry (PFA perfusion fixed frozen sections) - Anti-Lingo1 antibody (ab23631)

This image is courtesy of an Abreview submitted by Sophie Pezet.

Immunohistochemical analysis of rat hypothalamus frozen sections, labeling Lingo1 with ab23631 (diluted 1/3000 in 0.3% Triton X-100 in PBS). Tissues were perfusion fixed with 4% paraformaldehyde and cryoprotected in 30% sucrose. Incubation with ab23631 was for 18 hours at 20°C. ab60314 (undiluted) was used as the secondary antibody.



Immunocytochemistry/ Immunofluorescence - Anti-Lingo1 antibody (ab23631)

Images cropped from Lööv et al., PLoS One, 1, e29771, Fig. 1.; DOI: 10.1371/journal.pone.0029771

Immunocytochemical analysis of mouse neural stem and progenitor cells, labeling Lingo1 with ab23631. Cells were fixed in 4% paraformaldehyde, then permeabilized and blocked for 30 minutes in 5% natural goat serum in PBS. Incubation with ab23631 (diluted 1/200) was for 1-4 hours at RT. DAPI was used for staining nuclei.

Top Left: Lingo1 staining

Top Right: Nestin staining

Bottom Left: Merge

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