


## Product datasheet

# Anti-PC1/3 antibody ab3532

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### Overview

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<b>Product name</b>	Anti-PC1/3 antibody
<b>Description</b>	Rabbit polyclonal to PC1/3
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> WB
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse <b>Predicted to work with:</b> Rat, Cow, Human 
<b>Immunogen</b>	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
<b>General notes</b>	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&amp;As</p>

### 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: 0.05% Sodium azide Constituents: 0.1% BSA, 99% PBS
<b>Purity</b>	Immunogen affinity purified
<b>Primary antibody notes</b>	<p>The subtilisin-like Prohormone Convertase (PC) family is a group of cellular enzymes that cleave most prohormones and neuropeptide precursors. Numerous other cellular proteins, some viral proteins, and bacterial toxins that are transported by the constitutive secretory pathway are also targeted for maturation by PCs. PC family members share structural similarities, which include a heterogeneous ~10 kDa amino-terminal proregion, a highly conserved ~55 kDa subtilisin-like catalytic domain, and carboxyl-terminal domain that is heterogeneous in length and sequence. These enzymes become catalytically active following proregion cleavage within the appropriate cellular compartment. The subcellular localization of PC family members varies.</p>

Immunolocalization studies show that PC1 is found in the perinuclear region as well as the trans-Golgi network, whereas PC2 can be found in the trans-Golgi network as well as diffusely distributed in the peripheral cytoplasm.

**Clonality** Polyclonal  
**Isotype** IgG

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab3532 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 0.4 µg/ml. Detects a band of approximately 87 kDa (predicted molecular weight: 80 kDa).

## Target

**Function** Involved in the processing of hormone and other protein precursors at sites comprised of pairs of basic amino acid residues. Substrates include POMC, renin, enkephalin, dynorphin, somatostatin and insulin.

**Involvement in disease** Defects in PCSK1 are the cause of proprotein convertase 1 deficiency (PC1 deficiency) [MIM:600955]. PC1 deficiency is characterized by obesity, hypogonadism, hypoadrenalism, reactive hypoglycemia as well as marked small-intestinal absorptive dysfunction It is due to impaired processing of prohormones.

**Sequence similarities** Belongs to the peptidase S8 family. Furin subfamily.

**Cellular localization** Cytoplasmic vesicle > secretory vesicle. Localized in the secretion granules.

## Images



Western blot detection of PC1/3 from mouse pituitary extract using ab3532.



Western blot - Anti-PC1/3 antibody (ab3532)

Anti-PC1/3 antibody (ab3532) at 1 µg/ml + Spinal Cord (Mouse)  
Tissue Lysate at 10 µg

**Secondary**

Goat Anti-Rabbit IgG H&L (HRP) preadsorbed (**ab97080**) at  
1/5000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

**Predicted band size:** 80 kDa

**Observed band size:** 68-87 kDa

**Additional bands at:** 35 kDa, 60 kDa. We are unsure as to the identity of these extra bands.

**Exposure time:** 4 minutes

PC1/3 contains a number of potential glycosylation sites (SwissProt) which may explain its migration at a higher molecular weight than predicted. The band observed at 68 kDa could potentially be a cleaved form of PC1/3 due to the presence of a 27 amino acid signal peptide and an 83 amino acid propeptide.

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