Product datasheet

Anti-Dynorphin A antibody ab82509

Overview

**Product name**  
Anti-Dynorphin A antibody

**Description**  
Rabbit polyclonal to Dynorphin A

**Host species**  
Rabbit

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

**Species reactivity**  
Reacts with: Mouse, Human

**Immunogen**  
Synthetic peptide conjugated to KLH derived from within residues 200 to the C-terminus of Human Dynorphin A. Read Abcam’s proprietary immunogen policy (Peptide available as ab91634.)

**Positive control**  
This antibody gave a positive signal in human brain membrane tissue lysate. IHC-P: FFPE mouse dorsal root ganglion.

Properties

**Form**  
Liquid

**Storage instructions**  
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.

**Storage buffer**  
Preservative: 0.02% Sodium Azide  
Constituents: 1% BSA, PBS, pH 7.4

**Purity**  
Immunogen affinity purified

**Clonality**  
Polyclonal

**Isotype**  
IgG

Applications

Our Abpromise guarantee covers the use of ab82509 in the following tested applications.

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

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<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
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<tr>
<td>ICC/IF</td>
<td></td>
<td>Use a concentration of 5 µg/ml.</td>
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Dynorphins are a class of peptides produced by many different populations of neurons, which has some opioid-like activity. It is thus classed as an endogenous opioid peptide. The dynorphins, which include dynorphin A, dynorphin B, alpha and beta neoendorphin, and big dynorphin, are all the products of a single gene, 'preprodynorphin'. Dynorphin is produced in many different parts of the brain, including the hypothalamus, the hippocampus and the spinal cord, and has many different physiological actions, depending upon its site of production. Dynorphin is involved in modulating responses to several psychoactive substances, including cocaine. As such, it may help some individuals against addiction. Blocking dynorphin may help alleviate depression.

**Target**

**Relevance**

Dynorphins are a class of peptides produced by many different populations of neurons, which has some opioid-like activity. It is thus classed as an endogenous opioid peptide. The dynorphins, which include dynorphin A, dynorphin B, alpha and beta neoendorphin, and big dynorphin, are all the products of a single gene, 'preprodynorphin'. Dynorphin is produced in many different parts of the brain, including the hypothalamus, the hippocampus and the spinal cord, and has many different physiological actions, depending upon its site of production. Dynorphin is involved in modulating responses to several psychoactive substances, including cocaine. As such, it may help some individuals against addiction. Blocking dynorphin may help alleviate depression.

**Cellular localization**

Secreted

**Images**

IHC image of Dynorphin A staining in formalin fixed, paraffin embedded mouse dorsal root ganglion 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 ab82509, 10µg/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.

**Application**

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<td>IHC-P</td>
<td>Use a concentration of 5 µg/ml. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.</td>
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<tr>
<td>WB</td>
<td>Use a concentration of 1 µg/ml. Detects a band of approximately 28 kDa (predicted molecular weight: 28 kDa).</td>
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**Cellular localization**

Secreted

**Images**

IHC image of Dynorphin A staining in formalin fixed, paraffin embedded mouse dorsal root ganglion 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 ab82509, 10µg/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.
Anti-Dynorphin A antibody (ab82509) at 1 µg/ml + Human brain normal tissue lysate - membrane extract (ab29456) at 10 µg

**Secondary**
Goat polyclonal to Rabbit IgG - H&L - Pre-Adsorbed (HRP) at 1/3000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

**Predicted band size:** 28 kDa

**Observed band size:** 28 kDa

**Exposure time:** 15 minutes

ICC/IF image of ab82509 stained PC12 cells. The cells were 4% PFA 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 (ab82509, 5µg/ml) overnight at +4°C. The secondary antibody (green) was Alexa Fluor® 488 goat anti-rabbit 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. This antibody also gave a positive result in 100% methanol fixed (5 min) PC12 cells at 5µg/ml.
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Dynorphin A antibody (ab82509)

IHC image of Dynorphin A staining in human hippocampus formalin fixed paraffin embedded tissue section, performed on a Leica Bond™ system using the standard protocol F. 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 ab82509, 5µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

Western blot - Anti-Dynorphin A antibody (ab82509)

Anti-Dynorphin A antibody (ab82509) at 1/1000 dilution + Mouse synaptosome from hippocampal stratum lucidum tissue lysate at 10 µg

Secondary

HRP-conjugated anti-rabbit IgG polyclonal at 1/5000 dilution

Developed using the ECL technique.

Performed under non-reducing conditions.

Predicted band size: 28 kDa
Observed band size: 26 kDa
why is the actual band size different from the predicted?
Additional bands at: 56 kDa (possible non-specific binding), 65 kDa (possible non-specific binding)

Exposure time: 15 seconds

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