### Overview

<table>
<thead>
<tr>
<th><strong>Product name</strong></th>
<th>Anti-Cannabinoid Receptor II antibody</th>
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</thead>
<tbody>
<tr>
<td><strong>Description</strong></td>
<td>Rabbit polyclonal to Cannabinoid Receptor II</td>
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<td><strong>Host species</strong></td>
<td>Rabbit</td>
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<tr>
<td><strong>Tested applications</strong></td>
<td>Suitable for: IHC-Fr, WB, IHC-P, ICC, ICC/IF, Flow Cyt</td>
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<td><strong>Species reactivity</strong></td>
<td>Reacts with: Mouse, Rat, Human, Chinese hamster</td>
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<tr>
<td><strong>Immunogen</strong></td>
<td>Fusion protein corresponding to Rat Cannabinoid Receptor II aa 1-32 (N terminal).</td>
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<tr>
<td><strong>Positive control</strong></td>
<td>AtT20 cells.</td>
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</tbody>
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### Properties

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<th><strong>Form</strong></th>
<th>Liquid</th>
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<tbody>
<tr>
<td><strong>Storage instructions</strong></td>
<td>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.</td>
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</tbody>
</table>
| **Storage buffer** | Preservative: 0.05% Sodium azide  
Constituents: 50% Glycerol, 0.1% BSA, 49% PBS |
| **Purity** | Immunogen affinity purified |
| **Primary antibody notes** | Cannabinoids exert their well known physiological effects through two G protein coupled receptors, cannabinoid receptor 1 (CB1) and CB2. Both cannabinoid receptors have been shown to inhibit adenylyl cyclase as well as stimulate the mitogen-activated protein kinase, MAPK. CB1 receptors also modulate ion channels through direct G-protein interactions. Delta 9-tetrahydrocannabinol and related ligands likely exert their psychoactive effects by inhibiting presynaptic N- and P / Q type calcium channels. CB2 is thought to function primarily in the immune system although it has been suggested to be present in the central nervous system, including the retina. |
| **Clonality** | Polyclonal |
| **Isotype** | IgG |

#### Applications

Our Abpromise guarantee covers the use of ab3561 in the following tested applications.

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

**Tissue specificity**
Preferentially expressed in cells of the immune system with higher expression in B cells and NK cells (at protein level). Expressed in skin in suprabasal layers and hair follicles (at protein level). Highly expressed in tonsil and to a lower extent in spleen, peripheral blood mononuclear cells, and thymus. PubMed:14657172 could not detect expression in normal brain. Expressed in brain by perivascular microglial cells and dorsal root ganglion sensory neurons (at protein level).

**Sequence similarities**
Belongs to the G-protein coupled receptor 1 family.

**Post-translational modifications**
Constitutively phosphorylated on Ser-352; phosphorylation increases cell internalization and desensitizes the receptor.

**Cellular localization**

**Target**

**Images**

ab3561 labelling Cannabinoid Receptor II in the cytoplasm of Human tonsil tissue (right) compared with a negative control (left) by Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections). To expose target proteins, antigen retrieval method was performed using 10mM sodium citrate (pH 6.0) microwaved for 8-15 min. Tissues were blocked in 3% H2O2-methanol for 15 min at room temperature. Tissue sections were incubated with the primary antibody (1:20 in 3% BSA-PBS) overnight at 4°C. A **anti-rabbit HRP** was used as the secondary antibody followed by colorimetric detection using a DAB kit. Tissues were counterstained with hematoxylin and dehydrated with ethanol and
ab3561 labelling Cannabinoid Receptor II in the cytoplasm of Human skin tissue (right) compared with a negative control (left) by Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections). To expose target proteins, antigen retrieval method was performed using 10mM sodium citrate (pH 6.0) microwaved for 8-15 min. Tissues were blocked in 3% H2O2-methanol for 15 min at room temperature. Tissues sections were incubated with the primary antibody (1:20 in 3% BSA-PBS) overnight at 4°C. A anti-rabbit HRP was used as the secondary antibody followed by colorimetric detection using a DAB kit. Tissues were counterstained with hematoxylin and dehydrated with ethanol and xylene to prep for mounting.

**All lanes** : Anti-Cannabinoid Receptor II antibody (ab3561) at 1/200 dilution

**Lane 1** : HT29 cell lysate  
**Lane 2** : C6 cell lysate  
**Lane 3** : Rat colon cell lysate

Lysates/proteins at 25 µg per lane.

**Predicted band size** : 40 kDa  
**Observed band size** : 40 kDa

ab3561 staining Cannabinoid Receptor II in murine BV2 cells by Immunocytochemistry/Immunofluorescence. Cells were stimulated with 10 uM ADP for 15 minutes at 37°C, 5%CO₂ then washed 3X with PBS and fixed with 2% formaldehyde for 15 minutes at room temperature. A blocking step was performed for 1 hour at room temperature with 5% FBS/PBS/0.01% Triton-X-100. ab3561 used at a 1/500 dilution for 1 hour at room temperature then washed 3X PBS. The secondary was an Alexa Fluor 488 conjugated antibody, used at a 1/250 for 1 hour at room temperature, washed 3X PBS then mounted in Vectashield containing DAPI.
Quantification of CB1 and CB2 receptor surface expression in primary Human and HaCaT keratinocytes. (A) FL-1 shows autofluorescence (black population), non-specific binding of secondary antibody (dark grey population) and specific immunofluorescence obtained with CB1 (ab3558) and CB2 (ab3561) receptor antibodies, respectively (light grey population). Histogram shows representative measurement (5000 cells counted). (B) Differences in CB receptor expression between primary and HaCaT keratinocytes, showing marked increased expression of CB2 in primary keratinocytes (geo mean corrected for non-specific binding of secondary Ab). Data show mean values ±SEM obtained with two human primary keratinocyte samples and HaCaT cells, each measured three times.

Immunohistochemistry (Frozen sections) - Anti-Cannabinoid Receptor II antibody (ab3561)

This image is courtesy of an Abreview submitted by Ms Nancy Nutile-McMenemy

Immunocytochemistry/Immunofluorescence - Anti-Cannabinoid Receptor II antibody (ab3561)

Immunocytochemistry/immunofluorescence analysis of AtT20 cells transfected with the rat CB2 gene labeling Cannabinoid Receptor II with ab3561.

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