**Product datasheet**

**Anti-PPAR gamma antibody - ChIP Grade ab45036**

★★★★★ 2 Abreviews   25 References   6 Images

### Overview

<table>
<thead>
<tr>
<th>Product name</th>
<th>Anti-PPAR gamma antibody - ChIP Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Rabbit polyclonal to PPAR gamma - ChIP Grade</td>
</tr>
<tr>
<td>Host species</td>
<td>Rabbit</td>
</tr>
<tr>
<td>Specificity</td>
<td>Ab45036 detects peroxisome proliferator activated receptor (PPAR) gamma 2. This antibody does not detect PPAR alpha or PPAR delta. This sequence is from P37231-1 (Isoform 2), the sequence is not present in P37231-2 (Isoform 1) or P37231-3 (Isoform 3).</td>
</tr>
<tr>
<td>Tested applications</td>
<td>Suitable for: ChIP, IP, IHC-P, ICC/IF, WB, Functional Studies, EMSA, ELISA</td>
</tr>
<tr>
<td>Species reactivity</td>
<td>Reacts with: Mouse, Cow, Human, Non human primates</td>
</tr>
<tr>
<td>Immunogen</td>
<td>Predicted to work with: Dog, Pig</td>
</tr>
<tr>
<td>Immunogen</td>
<td>Synthetic peptide corresponding to Human PPAR gamma 2 aa 1-16.</td>
</tr>
<tr>
<td>Positive control</td>
<td>NIH-3T3 cell lysate</td>
</tr>
</tbody>
</table>

### Properties

<table>
<thead>
<tr>
<th>Form</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage instructions</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>
</tr>
<tr>
<td>Storage buffer</td>
<td>Preservative: 0.05% Sodium azide</td>
</tr>
<tr>
<td></td>
<td>Constituents: 0.1% BSA, PBS</td>
</tr>
<tr>
<td>Purity</td>
<td>Immunogen affinity purified</td>
</tr>
<tr>
<td>Clonality</td>
<td>Polyclonal</td>
</tr>
<tr>
<td>Isotype</td>
<td>IgG</td>
</tr>
</tbody>
</table>

### Applications

Run BLAST with

Run BLAST with
Function

Receptor that binds peroxisome proliferators such as hypolipidemic drugs and fatty acids. Once activated by a ligand, the receptor binds to a promoter element in the gene for acyl-CoA oxidase and activates its transcription. It therefore controls the peroxisomal beta-oxidation pathway of fatty acids. Key regulator of adipocyte differentiation and glucose homeostasis.

Tissue specificity

Highest expression in adipose tissue. Lower in skeletal muscle, spleen, heart and liver. Also detectable in placenta, lung and ovary.

Involvement in disease

Note=Defects in PPARG can lead to type 2 insulin-resistant diabetes and hyptertension. PPARG mutations may be associated with colon cancer.

Defects in PPARG may be associated with susceptibility to obesity (OBESITY) [MIM:601665]. It is a condition characterized by an increase of body weight beyond the limitation of skeletal and physical requirements, as the result of excessive accumulation of body fat.

Defects in PPARG are the cause of familial partial lipodystrophy type 3 (FPLD3) [MIM:604367]. Familial partial lipodystrophies (FPLD) are a heterogeneous group of genetic disorders characterized by marked loss of subcutaneous (sc) fat from the extremities. Affected individuals show an increased preponderance of insulin resistance, diabetes mellitus and dyslipidemia.

Genetic variations in PPARG can be associated with susceptibility to glioma type 1 (GLM1) [MIM:137800]. Gliomas are central nervous system neoplasms derived from glial cells and comprise astrocytomas, glioblastoma multiforme, oligodendrogliomas, and ependymomas.

Note=Polymorphic PPARG alleles have been found to be significantly over-represented among a cohort of American patients with sporadic glioblastoma multiforme suggesting a possible contribution to disease susceptibility.

Sequence similarities

Belongs to the nuclear hormone receptor family. NR1 subfamily.

Our Abpromise guarantee covers the use of ab45036 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>ChIP</td>
<td>Use at an assay dependent concentration. PubMed: 21247904</td>
<td></td>
</tr>
<tr>
<td>IP</td>
<td>Use at an assay dependent concentration. PubMed: 21247904</td>
<td></td>
</tr>
<tr>
<td>IHC-P</td>
<td>Use at an assay dependent concentration. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.</td>
<td></td>
</tr>
<tr>
<td>ICC/IF</td>
<td>1/500.</td>
<td></td>
</tr>
<tr>
<td>WB</td>
<td>1/500. Predicted molecular weight: 56 kDa. Can be blocked with Human PPAR gamma peptide (ab41762). By Western blot, this antibody detects an ~56 kDa protein representing PPAR gamma 2 from NIH-3T3 cell lysate.</td>
<td></td>
</tr>
</tbody>
</table>

Functional Studies

Use at an assay dependent concentration. Ab45036 inhibits PPAR gamma 2 DNA binding.

EMSA

Use at an assay dependent concentration.

ELISA

Use at an assay dependent concentration.
Contains 1 nuclear receptor DNA-binding domain.

**Cellular localization**

Nucleus.

**Images**

**Western blot - Anti-PPAR gamma antibody - ChIP Grade (ab45036)**

Lane 2: Anti-PPAR gamma antibody - ChIP Grade (ab45036)

Lane 1: Protein Marker

Lane 2: Mouse liver tissue lysate at 1 µg

**Secondary**

Lane 2: IRDye® 680RD Donkey anti-Rabbit

Performed under reducing conditions.

**Predicted band size:** 56 kDa

**Exposure time:** 2 seconds

ab45036 staining PPAR gamma in 3T3-L1 cells by ICC/IF (Immunocytochemistry/immunofluorescence). Cells were fixed with 4% paraformaldehyde, permeabilized with 0.1% Triton X-100 and blocked with 3% BSA for 30 minutes at room temperature. Samples were incubated with primary antibody (1:200) for 1 hour at room temperature. A Dylight 680-conjugated Goat anti-rabbit IgG polyclonal was used as the secondary antibody (1/1000).
All lanes: Anti-PPAR gamma antibody - ChIP Grade (ab45036) at 1/500 dilution

Lane 1: 3T3
Lane 2: 3T3-L1 differentiated day 7

Lysates/proteins at 20 µg per lane.

Predicted band size: 56 kDa

PPAR gamma is detected in 3T3-L1 Day 7 differentiated cell lysates with some background bands. No detection of PPAR gamma occurs in 3T3 cell lysate.

ab45036 positive staining PPAR gamma in Hela cells by ICC/IF (Immunocytochemistry/immunofluorescence) (right) negative control in absence of ab45036 (left). Cells were fixed with formalin, permeabilized with 0.1% Triton X-100 and blocked with 3% BSA for 30 minutes at room temperature. Samples were incubated with primary antibody (1/200 in PBS + 3% BSA) over night at 4°C. A DyLight 488-conjugated Goat anti-rabbit IgG polyclonal was used as the secondary antibody. F-actin (red) stained with red phalloidin and nuclei (blue) stained with DAPI.
Immunocytochemical analysis of PPAR gamma using ab45036 at the dilution 1/200. The image at the top shows 3T3-L1 cells differentiated (for 7 days) where PPAR gamma is shown in green. The image below shows 3T3-L1 undifferentiated cells where no PPAR gamma is detected.

Immunocytochemical analysis of PPAR gamma using ab45036 at the dilution 1/200. 3T3-L1 cells providing positive signal have been differentiated for 7 days.

PPAR gamma is shown in red, lipid droplets (that indicates the proper differentiation of the cells) are shown in green.

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