Product datasheet

Anti-ABCA1 antibody ab7360

Overview

Product name: Anti-ABCA1 antibody
Description: Rabbit polyclonal to ABCA1
Host species: Rabbit
Specificity: ab7360 has previously been shown to work well in ICC/IF on HeLa cells. However recent batches of this antibody, do not work in this application. We would recommend ab18180 for researchers wanting to detect ABCA1 in ICC/IF. For further information, please contact our Scientific Support Team.

Tested applications: Suitable for: IP, ELISA, WB, IHC-P, IHC-Fr
Species reactivity: Reacts with: Mouse, Human, Monkey
Immunogen: Synthetic peptide corresponding to Human ABCA1. Synthetic peptide: The immunogen is generated from within residues 1100-1300 of Human ABCA1
Database link: O95477

Properties

Form: Liquid
Storage instructions: Store at +4°C short term (1-2 weeks). Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer: Preservative: 0.02% Sodium azide
Constituent: PBS
Purity: Immunogen affinity purified
Clonality: Polyclonal
Isotype: IgG

Applications

Our Abpromise guarantee covers the use of ab7360 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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Function
CAMP-dependent and sulfonylurea-sensitive anion transporter. Key gatekeeper influencing intracellular cholesterol transport.

Tissue specificity
Widely expressed, but most abundant in macrophages.

Involvement in disease
Defects in ABCA1 are a cause of high density lipoprotein deficiency type 1 (HDLD1) [MIM:205400]; also known as analphalipoproteinemia or Tangier disease (TGD). HDLD1 is a recessive disorder characterized by absence of high density lipoprotein (HDL) cholesterol from plasma, accumulation of cholesteryl esters, premature coronary artery disease (CAD), hepatosplenomegaly, recurrent peripheral neuropathy and progressive muscle wasting and weakness.
Defects in ABCA1 are a cause of high density lipoprotein deficiency type 2 (HDLD2) [MIM:604091]; also known as familial hypoalphalipoproteinemia (FHA). HDLD2 is inherited as autosomal dominant trait. It is characterized by moderately low HDL cholesterol, predilection toward premature coronary artery disease (CAD) and a reduction in cellular cholesterol efflux.

Sequence similarities
Belongs to the ABC transporter superfamily. ABCA family. Contains 2 ABC transporter domains.

Domain
Multifunctional polypeptide with two homologous halves, each containing an hydrophobic membrane-anchoring domain and an ATP binding cassette (ABC) domain.

Post-translational modifications
Phosphorylation on Ser-2054 regulates phospholipid efflux. Palmitoylation by DHHC8 is essential for membrane localization.

Cellular localization
Membrane.

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<tr>
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<tbody>
<tr>
<td>IP</td>
<td></td>
<td>Use at an assay dependent concentration. PMID: 14660648</td>
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<tr>
<td>ELISA</td>
<td></td>
<td>Use at an assay dependent concentration. PMID: 21829447</td>
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<tr>
<td>WB</td>
<td>★★★★☆☆☆</td>
<td>1/500 - 1/1000. Predicted molecular weight: 220 kDa. Additional non-specific bands are seen at lower molecular weights, but do not interfere with the ABC1 signal. It is important not to boil the sample before loading onto the gel. Boiling can cause aggregation in large proteins, resulting in the proteins inability to enter into the gel.</td>
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<tr>
<td>IHC-P</td>
<td></td>
<td>1/500.</td>
</tr>
<tr>
<td>IHC-Fr</td>
<td></td>
<td>1/750. PubMed: 12547833</td>
</tr>
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Target

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The experiment was performed by treating RAW macrophages with 9-cis-retinoic acid and 22R-hydroxycholesterol, known inducers of ABCA1 expression in macrophages. Then total cell post-nuclear lysate (40µg protein) was separated by SDS-PAGE and detected using a 1:1000 dilution of ab7360 affinity purified Lot G incubated for 1 hour at room temperature (Lane A). Although there are lower molecular weight bands on the blot, the ABCA1 signal is excellent and gives the expected 3 bands. It is not known why ABCA1 runs as three bands, but it has been found to do so by many researchers. It is probably due to protein modifications such as glycosylation. The antibody was also tested against ABCA1 transiently expressed in 293 cells as an independent test with excellent results.

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Detection of ABCA1 in mouse peritoneal macrophages using ab7360. ECL exposure, 1 min.
Lane 4: T09 uninduced lysate
Lane 5: T09 induced lysate

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