Product datasheet

Anti-AGE antibody ab23722

Overview

Product name
Anti-AGE antibody

Description
Rabbit polyclonal to AGE

Host species
Rabbit

Specificity
ab23722 reacts with Advanced Glycation End Products (AGE), Cross-reacts with BSA and HSA < 1%

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

Immunogen
Advanced Glycation End Products (BSA-AGE and HSA-AGE)

Positive control
Human lens, arteriosclerotic plaques

General notes
ab23722 is suitable for the detection of different AGE products in tissues, tissue extracts and body fluids.

Properties

Form
Liquid

Storage instructions
Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.

Storage buffer
Preservative: 0.05% Sodium Azide
Constituents: 0.85% Sodium chloride, 0.05M PBS, pH 7.15

Purity
Protein A purified

Primary antibody notes
ab23722 is suitable for the detection of different AGE products in tissues, tissue extracts and body fluids.

Clonality
Polyclonal

Isotype
IgG

Applications

Our Abpromise guarantee covers the use of ab23722 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.
The non enzymatic reaction of reducing carbohydrates with lysine side chains and N terminal amino groups of macromolecules (amino acids, proteins, phospholipids and nucleic acids) is called the Maillard reaction or glycation. The latter products of this process, termed advanced glycation end products (AGEs), adversely affect the functional properties of proteins, lipids and DNA. In long lived tissue proteins, these chemical modifications accumulate with age and may contribute to the pathophysiology of ageing and long term complications of diabetes, atherosclerosis and renal failure.

### Cellular localization
Cell Membrane and Secreted

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>WB</td>
<td></td>
<td>Use at an assay dependent concentration. Can be blocked with Native Cow AGE-BSA protein (ab129535).</td>
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<tr>
<td>ICC/IF</td>
<td></td>
<td>Use a concentration of 5 µg/ml.</td>
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<tr>
<td>ELISA</td>
<td></td>
<td>Use a concentration of 1 µg/ml.</td>
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<tr>
<td>IHC-Fr</td>
<td></td>
<td>Use at an assay dependent concentration.</td>
</tr>
<tr>
<td>IHC-P</td>
<td></td>
<td>1/10000. PubMed: 19223295</td>
</tr>
</tbody>
</table>

**Target**

### Relevance
The non enzymatic reaction of reducing carbohydrates with lysine side chains and N terminal amino groups of macromolecules (amino acids, proteins, phospholipids and nucleic acids) is called the Maillard reaction or glycation. The latter products of this process, termed advanced glycation end products (AGEs), adversely affect the functional properties of proteins, lipids and DNA. In long lived tissue proteins, these chemical modifications accumulate with age and may contribute to the pathophysiology of ageing and long term complications of diabetes, atherosclerosis and renal failure.

### Cellular localization
Cell Membrane and Secreted

### Images
Western blot - Anti-AGE antibody (ab23722)
This image is courtesy of an Abreview submitted by Josephine Böhme

**All lanes** : Anti-AGE antibody (ab23722) at 1/1000 dilution

**Lane 1** : Mouse Brain Lysate (Brain and Hippocampus) at 25 µg
**Lane 2** : Glycated BSA at 15 µg

**Secondary**
**All lanes** : HRP-conjugated Goat anti-rabbit IgG at 1/800 dilution

Performed under reducing conditions.

12% SDS-PAGE gel run using denaturing conditions. Membrane blocked with 5% BSA for 30 minutes at room temperature. Primary antibody diluted in 5% BSA in TBS-T and incubated for 20 hours in a fridge

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-AGE antibody (ab23722)

ab23722 staining AGE in Rat aortic tissue sections showing the effects of diabetes and Ator on AGE expression by

Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formalin.
Samples were incubated with primary antibody (1/10000) overnight at 4°C.
A secondary antibody Fab fragment was used for 1 hour at room temperature.

The arrows indicated the sites of antibody staining. NC=normal controls,
DM=streptozotocin-induced diabetic rats.
ICC/IF image of ab23722 stained HepG2 cells. The cells were 4% formaldehyde 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 (ab23722, 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.

ab23722 (1µg/ml) staining AGE in human colon using an automated system (DAKO Autostainer Plus). Using this protocol there is strong staining of both cell membrane and cytoplasm.

Sections were rehydrated and antigen retrieved with the Dako 3 in 1 AR buffer EDTA pH 9.0 in a DAKO PT link. Slides were peroxidase blocked in 3% H2O2 in methanol for 10 mins. They were then blocked with Dako Protein block for 10 minutes (containing casein 0.25% in PBS) then incubated with primary antibody for 20 min and detected with Dako envision flex amplification kit for 30 minutes. Colorimetric detection was completed with Diaminobenzidine for 5 minutes. Slides were counterstained with Haematoxylin and coverslipped under DePeX.

Please note that, for manual staining, optimization of primary antibody concentration and incubation time is recommended. Signal amplification may be required.

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