abcam

Product datasheet

Anti-RAGE antibody [1C1] ab54741

5 Abreviews 19 References 5 Images

Overview

Product name	Anti-RAGE antibody [1C1]
Description	Mouse monoclonal [1C1] to RAGE
Host species	Mouse
Tested applications	**Suitable for:** WB, IP, IHC-P
Species reactivity	**Reacts with:** Human, Recombinant fragment
Immunogen	Recombinant full length protein (GST-tag) corresponding to Human RAGE aa 23-405. Full length mature chain, without signal peptide. Database link: **Q15109**
Positive control	WB: Human kidney tissue lysate. RAGE transfected HEK-293T cell lysate. Recombinant RAGE protein. Flow Cytometry: Jurkat cells. IHC-P: Human lung tissue.
General notes	This product was changed from ascites to tissue culture supernatant on 13th Feb 2019. Please note that the dilutions may need to be adjusted accordingly. If you have any questions, please do not hesitate to contact our scientific support team. The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.
Storage buffer	pH: 7.40 Constituent: PBS In 1x PBS
Purity	Tissue culture supernatant

Clonality	Monoclonal
Clone number	1C1
Isotype	IgG2a
Light chain type	kappa

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab54741 in the following tested applications.

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

Application	Abreviews	Notes
WB	★★★★☆ (3)	Use at an assay dependent concentration. Predicted molecular weight: 43 kDa. This antibody has only been tested in WB against the recombinant fragment used as immunogen. We have no data on the detection of endogenous protein in Western blot
IP		Use at an assay dependent concentration.
IHC-P	★☆☆☆☆ (1)	Use at an assay dependent concentration. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

Target

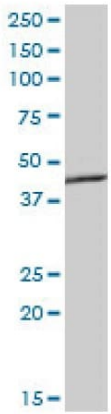
Function Mediates interactions of advanced glycosylation end products (AGE). These are nonenzymatically glycosylated proteins which accumulate in vascular tissue in aging and at an accelerated rate in diabetes. Acts as a mediator of both acute and chronic vascular inflammation in conditions such as atherosclerosis and in particular as a complication of diabetes. AGE/RAGE signaling plays an important role in regulating the production/expression of TNF-alpha, oxidative stress, and endothelial dysfunction in type 2 diabetes. Interaction with S100A12 on endothelium, mononuclear phagocytes, and lymphocytes triggers cellular activation, with generation of key proinflammatory mediators. Interaction with S100B after myocardial infarction may play a role in myocyte apoptosis by activating ERK1/2 and p53/TP53 signaling (By similarity). Receptor for amyloid beta peptide. Contributes to the translocation of amyloid-beta peptide (ABPP) across the cell membrane from the extracellular to the intracellular space in cortical neurons. ABPP-initiated RAGE signaling, especially stimulation of p38 mitogen-activated protein kinase (MAPK), has the capacity to drive a transport system delivering ABPP as a complex with RAGE to the intraneuronal space.

Tissue specificity Endothelial cells.

Sequence similarities Contains 2 Ig-like C2-type (immunoglobulin-like) domains.
Contains 1 Ig-like V-type (immunoglobulin-like) domain.

Cellular localization Secreted and Cell membrane.

Images



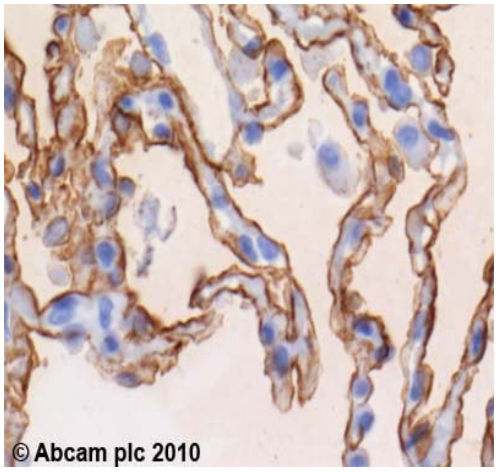
Western blot - Anti-RAGE antibody [1C1] (ab54741)

Anti-RAGE antibody [1C1] (ab54741) at 1 µg/ml + Human kidney tissue lysate

Developed using the ECL technique.

Predicted band size: 43 kDa

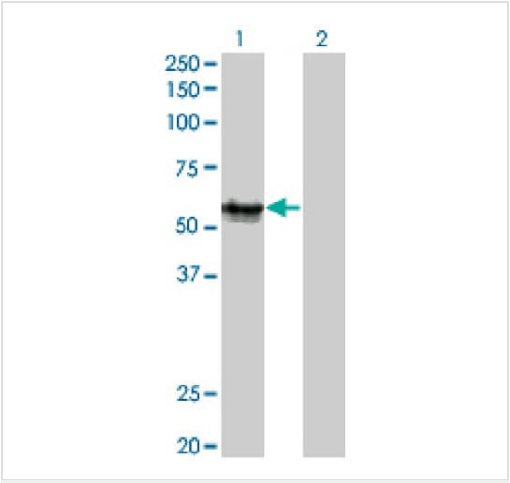
This image was generated using the ascites version of the product.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-RAGE antibody [1C1] (ab54741)

ab54741 (1 µg/ml) staining RAGE in human lung using an automated system (DAKO Autostainer Plus). Using this protocol there is membrane staining throughout the alveloli.
Sections were rehydrated and antigen retrieved with the Dako 3 in 1 AR buffer citrate pH 6.0 in a DAKO PT link. Slides were peroxidase blocked in 3% H_2O_2 in methanol for 10 minutes. They were then blocked with Dako Protein block for 10 minutes (containing casein 0.25% in PBS) then incubated with primary antibody for 20 minutes 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.

This image was generated using the ascites version of the product.



Western blot - Anti-RAGE antibody [1C1] (ab54741)

All lanes : Anti-RAGE antibody [1C1] (ab54741) at 1 µg/ml

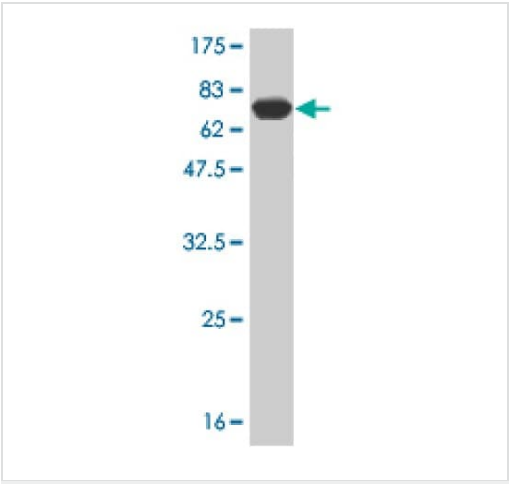
Lane 1 : HEK-293T (human epithelial cell line from embryonic kidney transformed with large T antigen) RAGE transfected cell lysate

Lane 2 : HEK-293T (human epithelial cell line from embryonic kidney transformed with large T antigen) non-transfected cell lysate

Developed using the ECL technique.

Predicted band size: 43 kDa

This image was generated using the ascites version of the product.



Western blot - Anti-RAGE antibody [1C1] (ab54741)

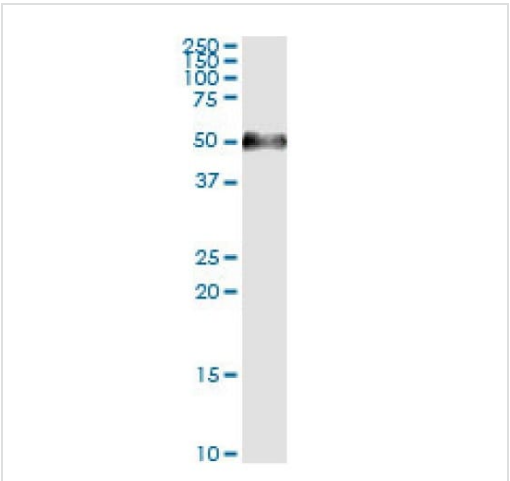
Anti-RAGE antibody [1C1] (ab54741) at 1 µg/ml + tagged recombinant protein immunogen

Developed using the ECL technique.

Predicted band size: 43 kDa

Predicted band size of immunogen is 68 kDa

This image was generated using the ascites version of the product.



Immunoprecipitation - Anti-RAGE antibody [1C1] (ab54741)

Immunoprecipitation of RAGE transfected lysate using ab54741 and Protein A Magnetic Bead. Immunoblotted with a rabbit polyclonal anti-RAGE antibody.

This image was generated using the ascites version of the product.

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