abcam

Product datasheet

Anti-RAGE antibody [EPR21171] - BSA and Azide free ab228861

Recombinant RabMAb

8 Images

Overview

Product name	Anti-RAGE antibody [EPR21171] - BSA and Azide free
Description	Rabbit monoclonal [EPR21171] to RAGE - BSA and Azide free
Host species	Rabbit
Tested applications	**Suitable for:** WB, IHC-P, IHC-Fr, ICC/IF, Flow Cyt, IP
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Recombinant fragment within Human RAGE aa 1-350. The exact sequence is proprietary. Database link: Q15109
Positive control	IHC-P: Human lung tissue.
General notes	Ab228861 is the carrier-free version of ab216329. This format is designed for use in antibody labeling, including fluorochromes, metal isotopes, oligonucleotides, enzymes. Our carrier-free formats are supplied in a buffer free of BSA, sodium azide and glycerol for higher conjugation efficiency. Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with <1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold. ab228861 is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm. *Maxpar® is a trademark of Fluidigm Canada Inc.* This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information see here. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

Properties

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle.
Storage buffer	Constituent: PBS
Carrier free	Yes
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR21171
Isotype	IgG

Applications

Our Abpromise guarantee covers the use of **ab228861** 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		Use at an assay dependent concentration. Predicted molecular weight: 42 kDa.
IHC-P		Use at an assay dependent concentration. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.
IHC-Fr		Use at an assay dependent concentration. Perform heat mediated antigen retrieval by using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20) before commencing with IHC staining protocol.
ICC/IF		Use at an assay dependent concentration.
Flow Cyt		Use at an assay dependent concentration.
IP		Use at an assay dependent concentration.

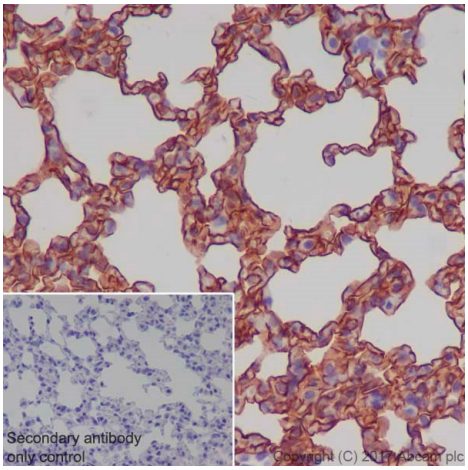
Target

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



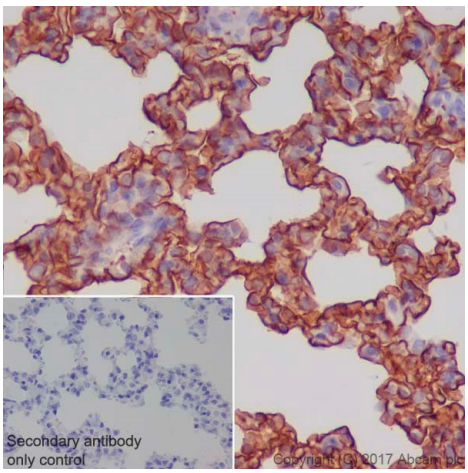
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-RAGE antibody [EPR21171] - BSA and Azide free (ab228861)

Immunohistochemical analysis of paraffin-embedded mouse lung tissue labeling RAGE with ab216329 at 1/4000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Mainly membranous staining on epithelial cells of mouse lung (PMID: 19592063; PMID: 26472810) is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab216329).

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



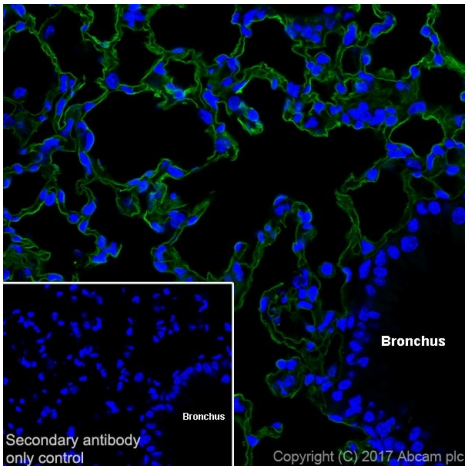
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-RAGE antibody [EPR21171] - BSA and Azide free (ab228861)

Immunohistochemical analysis of paraffin-embedded rat lung tissue labeling RAGE with ab216329 at 1/4000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Mainly membranous staining on epithelial cells of rat lung (PMID: 19592063; PMID: 26472810) is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab216329).

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



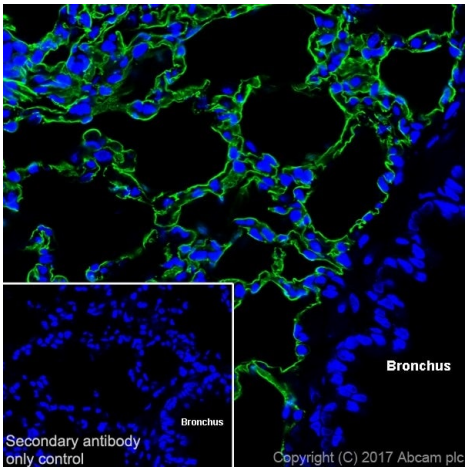
Immunohistochemistry (Frozen sections) - Anti-RAGE antibody [EPR21171] - BSA and Azide free (ab228861)

Immunohistochemical analysis of 4% paraformaldehyde-fixed, 0.2% Triton X-100 permeabilized frozen mouse lung tissue labeling RAGE with ab216329 at 1/500 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Positive membrane staining on alveolar epithelial cells, negative on the bronchial epithelial cells on mouse lung tissue section is observed (PMID: 15173891).

The nuclear counter stain is DAPI (blue).

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) at 1/1000 dilution.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab216329).



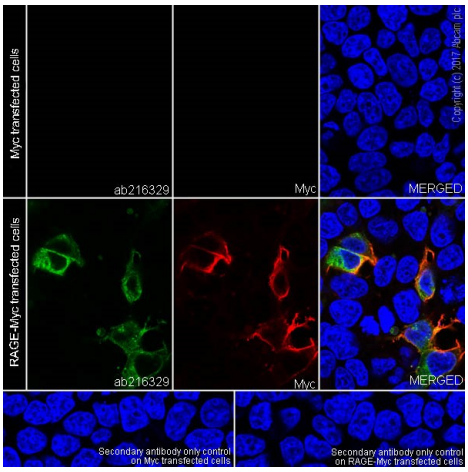
Immunohistochemistry (Frozen sections) - Anti-RAGE antibody [EPR21171] - BSA and Azide free (ab228861)

Immunohistochemical analysis of 4% paraformaldehyde-fixed, 0.2% Triton X-100 permeabilized frozen rat lung tissue labeling RAGE with ab216329 at 1/500 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Positive membrane staining on alveolar epithelial cells, negative on the bronchial epithelial cells on rat lung tissue section is observed (PMID: 15173891).

The nuclear counter stain is DAPI (blue).

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) at 1/1000 dilution.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab216329).



Immunocytochemistry/ Immunofluorescence - Anti-RAGE antibody [EPR21171] - BSA and Azide free (ab228861)

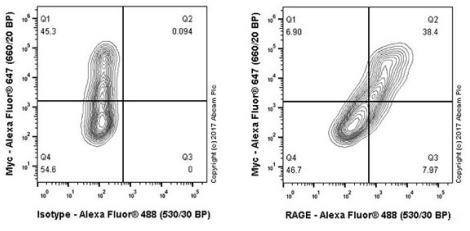
Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100-permeabilized HEK-293T (human epithelial cell line from embryonic kidney transformed with large T antigen) cells transfected with Myc-tagged RAGE expression vector labeling RAGE with ab216329 at 1/100 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Confocal image showing positive staining in HEK-293T cells transfected with Myc-tagged RAGE expression vector.

The nuclear counter stain is DAPI (blue). Myc-Tag is detected with Myc-Tag (9B11) Mouse mAb (Alexa Fluor® 647 Conjugate) (red) at 1/1000 dilution.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution.

Negative control: Myc-transfected HEK-293T cells.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab216329).



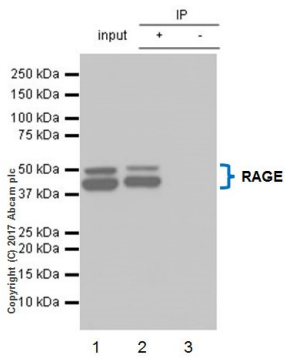
Flow Cytometry - Anti-RAGE antibody [EPR21171] - BSA and Azide free (ab228861)

Flow cytometric analysis of 4% paraformaldehyde-fixed HEK-293T (human epithelial cell line from embryonic kidney transformed with large T antigen) cells transfected with Myc-tagged RAGE expression vector labeling RAGE with ab216329 at 1/500 dilution (right panel) compared with a Rabbit IgG, monoclonal [EPR25A] - Isotype Control (ab172730) (left panel). Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) at 1/2000 dilution was used as the secondary antibody.

Fresh cells were surface-stained with ab172730 and ab216329 respectively. Then fixed with 2% PFA for 15min and intracellular stained with anti-Myc tag antibody (Y axis). Only Myc+ population give positive signal.

This data was developed using the same antibody clone in a

different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab216329).



Immunoprecipitation - Anti-RAGE antibody [EPR21171] - BSA and Azide free (ab228861)

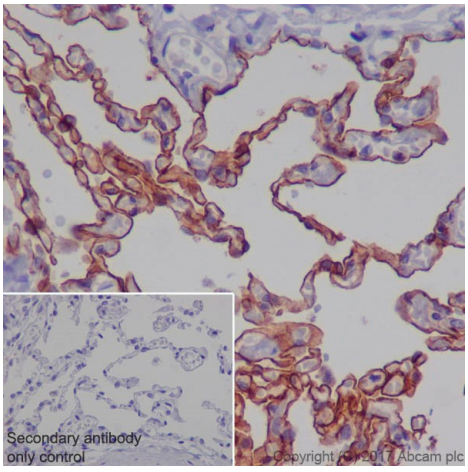
RAGE was immunoprecipitated from 0.35 mg of mouse lung lysate with ab216329 at 1/30 dilution. Western blot was performed from the immunoprecipitate using ab216329 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366), was used for detection at 1/10000 dilution.

Lane 1: Mouse lung lysate 10 µg (Input).
Lane 2: ab216329 IP in mouse lung lysate.
Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab216329 in mouse lung lysate.

Exposure time: 10 seconds.

Blocking and dilution buffer and concentration: 5% NFDM/TBST.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab216329).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-RAGE antibody [EPR21171] - BSA and Azide free (ab228861)

Immunohistochemical analysis of paraffin-embedded human lung tissue labeling RAGE with ab216329 at 1/4000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Membranous staining on epithelial cells of human lung (PMID: 19592063; PMID: 26472810) is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab216329).

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit https://www.abcam.com/abpromise or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors