

RAGE (AGER) Antibody (N-term)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2401a

Specification

RAGE (AGER) Antibody (N-term) - Product Information

Application	WB, IHC-P,E
Primary Accession	Q15109
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	42803
Antigen Region	29-59

RAGE (AGER) Antibody (N-term) - Additional Information

Gene ID 177

Other Names

Advanced glycosylation end product-specific receptor, Receptor for advanced glycosylation end products, AGER, RAGE

Target/Specificity

This RAGE (AGER) antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 29-59 amino acids from the N-terminal region of human RAGE (AGER).

Dilution

WB~~1:2000
IHC-P~~1:50~100

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

RAGE (AGER) Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

RAGE (AGER) Antibody (N-term) - Protein Information

Name AGER

Synonyms RAGE

Function Cell surface pattern recognition receptor that senses endogenous stress signals with a broad ligand repertoire including advanced glycation end products, S100 proteins, high-mobility group box 1 protein/HMGB1, amyloid beta/APP oligomers, nucleic acids, phospholipids and glycosaminoglycans (PubMed:[27572515](#), PubMed:[28515150](#), PubMed:[34743181](#)). Advanced glycosylation end products are nonenzymatically glycosylated proteins which accumulate in vascular tissue in aging and at an accelerated rate in diabetes (PubMed:[21565706](#)). These ligands accumulate at inflammatory sites during the pathogenesis of various diseases, including diabetes, vascular complications, neurodegenerative disorders, and cancers and RAGE transduces their binding into pro-inflammatory responses. Upon ligand binding, uses TIRAP and MYD88 as adapters to transduce the signal ultimately leading to the induction of inflammatory cytokines IL6, IL8 and TNFalpha through activation of NF-kappa-B (PubMed:[21829704](#), PubMed:[33436632](#)). Interaction with S100A12 on endothelium, mononuclear phagocytes, and lymphocytes triggers cellular activation, with generation of key pro-inflammatory mediators (PubMed:[19386136](#)). Interaction with S100B after myocardial infarction may play a role in myocyte apoptosis by activating ERK1/2 and p53/TP53 signaling (By similarity). Contributes to the translocation of amyloid- beta peptide (ABPP) across the cell membrane from the extracellular to the intracellular space in cortical neurons (PubMed:[19906677](#)). 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. Participates in endothelial albumin transcytosis together with HMGB1 through the RAGE/SRC/Caveolin-1 pathway, leading to endothelial hyperpermeability (PubMed:[27572515](#)). Mediates the loading of HMGB1 in extracellular vesicles (EVs) that shuttle HMGB1 to hepatocytes by transferrin-mediated endocytosis and subsequently promote hepatocyte pyroptosis by activating the NLRP3 inflammasome (PubMed:[34743181](#)). Promotes also extracellular hypomethylated DNA (CpG DNA) uptake by cells via the endosomal route to activate inflammatory responses (PubMed:[24081950](#), PubMed:[28515150](#)).

Cellular Location

[Isoform 1]: Cell membrane; Single-pass type I membrane protein [Isoform 10]: Cell membrane; Single-pass type I membrane protein

Tissue Location

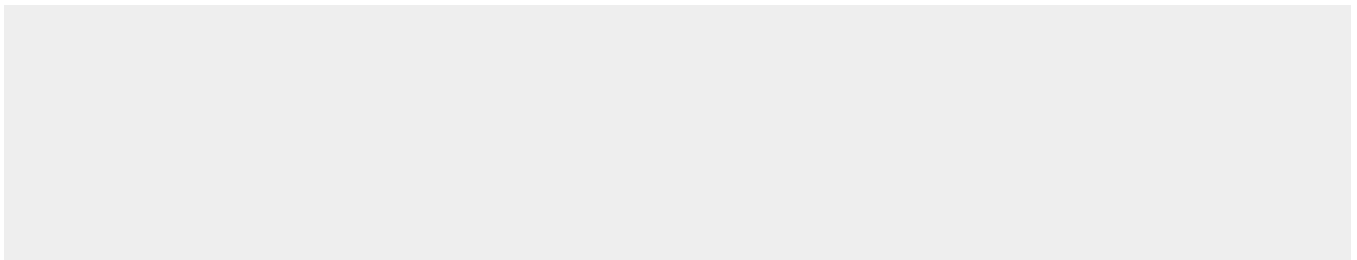
Endothelial cells.

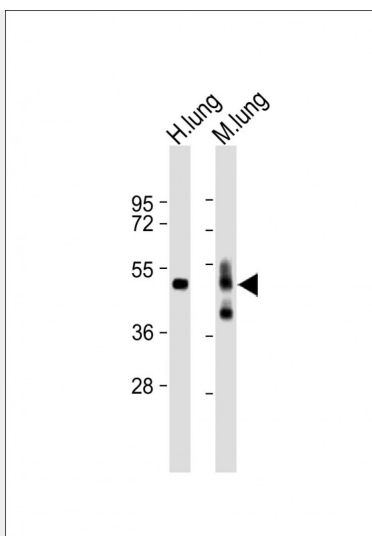
RAGE (AGER) Antibody (N-term) - Protocols

Provided below are standard protocols that you may find useful for product applications.

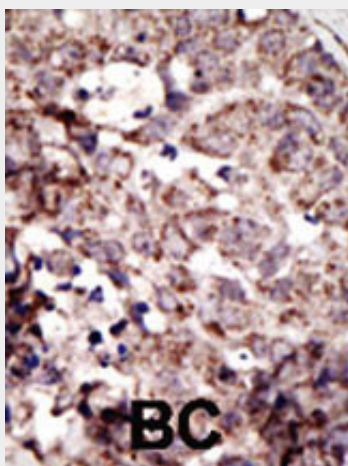
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

RAGE (AGER) Antibody (N-term) - Images





All lanes : Anti-hAGER-K44 at 1:2000 dilution Lane 1: Human lung lysate Lane 2: Mouse lung lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 43 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

RAGE (AGER) Antibody (N-term) - Background

AGER is a member of the immunoglobulin superfamily of cell surface molecules. It is a receptor for various molecules, including the amyloidogenic form of serum amyloid A, amyloid-beta protein, members of the S100/calgranulin superfamily and advanced glycation end products.

RAGE (AGER) Antibody (N-term) - References

Schlueter, C., et al., *Biochim. Biophys. Acta* 1630(1):1-6 (2003). Shanmugam, N., et al., *J. Biol. Chem.* 278(37):34834-34844 (2003). Kuniyasu, H., et al., *Oncol. Rep.* 10(2):445-448 (2003). Hsieh, H.L., et al., *Biochem. Biophys. Res. Commun.* 307(2):375-381 (2003). Rocken, C., et al., *Am. J. Pathol.* 162(4):1213-1220 (2003).

RAGE (AGER) Antibody (N-term) - Citations

- [Inhibiting receptor for advanced glycation end product \(AGE\) and oxidative stress involved in the protective effect mediated by glucagon-like peptide-1 receptor on AGE induced](#)

[neuronal apoptosis.](#)