

RAGE Antibody
Rabbit mAb
Catalog # AP91064

Specification

RAGE Antibody - Product Information

Application	WB
Primary Accession	Q15109
Reactivity	Rat
Clonality	Monoclonal
Other Names	
Advanced glycosylation end product-specific receptor; Ager;	
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	42803 Da

RAGE Antibody - Additional Information

Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human RAGE
Description	The receptor for advanced glycation end products (RAGE) is member of the immunoglobulin (Ig) superfamily. Mediates interactions of advanced glycosylation end products (AGE). Binding of AGEs to RAGE results in the induction of cellular oxidant stress and activation of the transcription factor NFkB. Evidence suggests that the induction of oxidant stress results in the activation of an intracellular cascade involving p21 ras and MAP kinase, which leads to activation of transcription.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

RAGE Antibody - 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](http://www.uniprot.org/citations/27572515), PubMed: [28515150](http://www.uniprot.org/citations/28515150), PubMed: [34743181](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/21829704), PubMed: [33436632](http://www.uniprot.org/citations/33436632)). Interaction with S100A12 on endothelium, mononuclear phagocytes, and lymphocytes triggers cellular activation, with generation of key pro-inflammatory mediators (PubMed: [19386136](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/34743181)). Promotes also extracellular hypomethylated DNA (CpG DNA) uptake by cells via the endosomal route to activate inflammatory responses (PubMed: [24081950](http://www.uniprot.org/citations/24081950), PubMed: [28515150](http://www.uniprot.org/citations/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

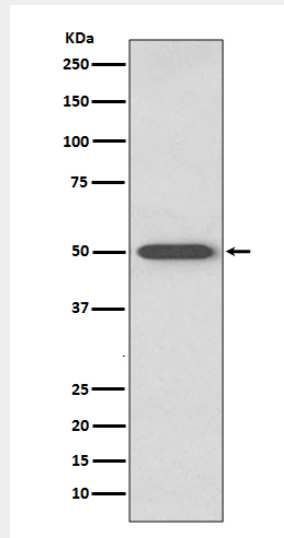
Endothelial cells.

RAGE Antibody - 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 Antibody - Images



Western blot analysis of RAGE expression in mouse lung lysate.