

**RAGE (AGER) Antibody (N-term) Blocking peptide**  
**Synthetic peptide**  
**Catalog # BP2401a****Specification**

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**RAGE (AGER) Antibody (N-term) Blocking peptide - Product Information**Primary Accession [Q15109](#)**RAGE (AGER) Antibody (N-term) Blocking peptide - Additional Information****Gene ID** 177**Other Names**

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

**Target/Specificity**

The synthetic peptide sequence used to generate the antibody [AP2401a](/product/products/AP2401a) was selected from the N-term region of human AGER. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

**Format**

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

**Precautions**

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

**RAGE (AGER) Antibody (N-term) Blocking peptide - 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))

target="\_blank">21565706</a>). 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:<a href="http://www.uniprot.org/citations/21829704" target="\_blank">21829704</a>). Interaction with S100A12 on endothelium, mononuclear phagocytes, and lymphocytes triggers cellular activation, with generation of key pro-inflammatory mediators (PubMed:<a href="http://www.uniprot.org/citations/19386136" target="\_blank">19386136</a>). 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:<a href="http://www.uniprot.org/citations/19906677" target="\_blank">19906677</a>). 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:<a href="http://www.uniprot.org/citations/27572515" target="\_blank">27572515</a>). 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:<a href="http://www.uniprot.org/citations/34743181" target="\_blank">34743181</a>). Promotes also extracellular hypomethylated DNA (CpG DNA) uptake by cells via the endosomal route to activate inflammatory responses (PubMed:<a href="http://www.uniprot.org/citations/24081950" target="\_blank">24081950</a>, PubMed:<a href="http://www.uniprot.org/citations/28515150" target="\_blank">28515150</a>).

#### **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) Blocking peptide - Protocols**

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

- [Blocking Peptides](#)

### **RAGE (AGER) Antibody (N-term) Blocking peptide - Images**

### **RAGE (AGER) Antibody (N-term) Blocking peptide - Background**

This gene encodes 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. The gene lies within the major histocompatibility complex (MHC) class III region on chromosome 6.

### **RAGE (AGER) Antibody (N-term) Blocking peptide - 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).