

**DESCRIPTION**

<b>Species Reactivity</b>	Human
<b>Specificity</b>	detects human RAGE in ELISAs and Western blots. In Western blots, approximately 25% cross-reactivity with recombinant mouse RAGE and recombinant rat RAGE is observed.
<b>Source</b>	Monoclonal Mouse IgG <sub>2B</sub> Clone # 176902
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human RAGE Gln24-Ala344 Accession # Q15109
<b>Conjugate</b>	Alexa Fluor 700 Excitation Wavelength: 675-700 nm Emission Wavelength: 723 nm
<b>Formulation</b>	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide

\*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

**APPLICATIONS**

<b>Please Note:</b> Optimal dilutions should be determined by each laboratory for each application. <i>General Protocols</i> are available in the Technical Information section on our website.	
<b>ELISA Capture (Matched Antibody Pair)</b>	Optimal dilution of this antibody should be experimentally determined.
<b>ELISA Detection (Matched Antibody Pair)</b>	Optimal dilution of this antibody should be experimentally determined.
<b>Western Blot</b>	Optimal dilution of this antibody should be experimentally determined.
<b>Blockade of Receptor-ligand Interaction</b>	Optimal dilution of this antibody should be experimentally determined.

**PREPARATION AND STORAGE**

<b>Shipping</b>	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

**BACKGROUND**

Advanced glycation endproducts (AGE) are adducts formed by the non-enzymatic glycation or oxidation of macromolecules (1). AGE forms during aging and its formation is accelerated under pathophysiological states such as diabetes, Alzheimer's disease, renal failure and immune/inflammatory disorders. Receptor for Advanced Glycation Endproducts (RAGE), named for its ability to bind AGE, is a multi-ligand receptor belonging the immunoglobulin (Ig) superfamily. Besides AGE, RAGE binds amyloid β-peptide, S100/calgranulin family proteins, high mobility group B1 (HMGB1, also known as amphoterin) and leukocyte integrins (1, 2).

The human RAGE gene encodes a 404 amino acid residues (aa) type I transmembrane glycoprotein with a 22 aa signal peptide, a 320 aa extracellular domain containing an Ig-like V-type domain and two Ig-like Cε-type domains, a 21 aa transmembrane domain and a 41 aa cytoplasmic domain (3). The V-type domain and the cytoplasmic domain are important for ligand binding and for intracellular signaling, respectively. Two alternative splice variants, lacking the V-type domain or the cytoplasmic tail, are known (1, 4). RAGE is highly expressed in the embryonic central nervous system (5). In adult tissues, RAGE is expressed at low levels in multiple tissues including endothelial and smooth muscle cells, mononuclear phagocytes, pericytes, microglia, neurons, cardiac myocytes and hepatocytes (6). The expression of RAGE is upregulated upon ligand interaction. Depending on the cellular context and interacting ligand, RAGE activation can trigger differential signaling pathways that affect divergent pathways of gene expression (1, 7). RAGE activation modulates varied essential cellular responses (including inflammation, immunity, proliferation, cellular adhesion and migration) that contribute to cellular dysfunction associated with chronic diseases such as diabetes, cancer, amyloidoses and immune or inflammatory disorders (1).

**PRODUCT SPECIFIC NOTICES**

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