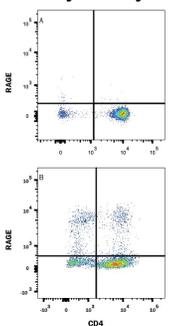


DESCRIPTION	
Species Reactivity	Mouse
Specificity	Detects mouse RAGE in direct ELISAs and Western blots. In Western blots, approximately 15% cross-reactivity with recombinant canine RAGE and no cross-reactivity with recombinant human RAGE or recombinant rat RAGE is observed.
Source	Monoclonal Rat IgG _{2A} Clone # 697023
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse RAGE Gly23-Leu342 Accession # NP_031451
Conjugate	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 nm
Formulation	Supplied in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *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		
Please Note: Optimal dilutions should be determined by each laboratory for each application. <i>General Protocols</i> are available in the <i>Technical Information</i> section on our website.		
	Recommended Concentration	Sample
Flow Cytometry	0.5 µg/10 ⁶ cells	See Below

DATA	
<p>Flow Cytometry</p> 	<p>Detection of RAGE in Mouse Splenocytes by Flow Cytometry. Mouse splenocytes either (A) unstimulated or (B) stimulated to induce Th1 cells were stained with Rat Anti-Mouse RAGE Alexa Fluor® 405-conjugated Monoclonal Antibody (Catalog # FAB11795V) and Rat Anti-Mouse CD4 APC-conjugated Monoclonal Antibody (Catalog # FAB554A). Quadrant markers were set based on control antibody staining (Catalog # IC006V). View our protocol for Staining Membrane-associated Proteins.</p>

PREPARATION AND STORAGE	
Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. <ul style="list-style-type: none"> ● 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 pathophysiologic 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 multiligand receptor belonging to 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 mouse RAGE gene encodes a 403 amino acid (aa) residue type I transmembrane glycoprotein with a 22 aa signal peptide, a 319 aa extracellular domain containing a 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).

References:

1. Schmidt, A. *et al.* (2001) *J. Clin. Invest.* **108**:949.
2. Chavakis, T. *et al.* (2003) *J. Exp. Med.* **198**:507.
3. Renard, C. *et al.* (1997) *Mol. Pharmacol.* **52**:54.
4. Yonekura, H. *et al.* (2003) *Biochem. J.* **370**:1097.
5. Hori, O. *et al.* (1995) *J. Biol. Chem.* **270**:25752.
6. Brett, J. *et al.* (1993) *Am. J. Pathol.* **143**:1699.
7. Valencia, J.V. *et al.* (2004) *Diabetes* **53**:743.

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.