

DESCRIPTION

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| Species Reactivity | Canine |
| Specificity | detects canine RAGE in ELISAs and Western blots. In sandwich immunoassays, approximately 0.5% cross-reactivity with recombinant human RAGE is observed and less than 0.1% cross-reactivity with recombinant mouse RAGE and recombinant rat RAGE. |
| Source | Polyclonal Sheep IgG |
| Purification | Antigen Affinity-purified |
| Immunogen | Mouse myeloma cell line NS0-derived recombinant canine RAGE Asp25-Val339 Accession # XP_532093 |
| Conjugate | Alexa Fluor 350 Excitation Wavelength: 346 nm Emission Wavelength: 442 nm |
| Formulation | 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

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| Please Note: 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. | |
| ELISA Capture (Matched Antibody Pair) | Optimal dilution of this antibody should be experimentally determined. |
| ELISA Detection (Matched Antibody Pair) | Optimal dilution of this antibody should be experimentally determined. |
| Western Blot | Optimal dilution of this antibody should be experimentally determined. |

PREPARATION AND STORAGE

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| 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. 12 months from date of receipt, 2 to 8 °C as supplied |

BACKGROUND

Advanced glycation endproducts (AGEs) are adducts formed by the non-enzymatic glycation of macromolecules. AGE formation is accelerated in oxidative and hyperglycemic conditions, diabetes, renal failure, atherosclerosis, Alzheimer's disease, arthritis, and in normal aging (1-5). Receptor for advanced glycation endproducts (RAGE) is a 35 kDa type I transmembrane protein belonging the immunoglobulin superfamily. Besides AGEs, RAGE binds β-amyloid peptide, S100/calgranulin family proteins, HMGB1/amphoterin, and leukocyte integrins (6-9). Mature canine RAGE consists of a 383 amino acid (aa) extracellular domain (ECD) with one Ig-like V-type domain and two Ig-like C-type domains, a 23 aa transmembrane segment, and a 43 aa cytoplasmic domain (10). Within the ECD, canine RAGE shares 73%-77% aa sequence identity with human, mouse, and rat RAGE. In human, soluble forms of RAGE are generated by alternate splicing and are associated with multiple disease states (11, 12). RAGE is expressed in the embryonic central nervous system and on macrophages, monocytes, smooth muscle cells, and endothelial cells (13-15). It is upregulated in response to AGE accumulation, and its activation induces a broad proinflammatory response (6, 15). The increased production of reactive oxygen species during inflammation promotes additional AGE formation and RAGE upregulation, a cycle that exacerbates diabetic complications and inflammation-induced tissue injury (2, 4).

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