Revision 1

Store at -20C

#4679

RAGE Antibody

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R	Endogenous	58, 52, 48	Rabbit	#Q15109	177

Product Usage Information

Application	Dilution
Western Blotting	1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

Specificity/Sensitivity

RAGE Antibody detects endogenous levels of total RAGE protein.

Species predicted to react based on 100% sequence homology

Monkey

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the amino terminus of human RAGE. Antibodies are purified by protein A and peptide affinity chromatography.

Background

The receptor for advanced glycation end products (RAGE) is a member of the immunoglobulin (Ig) superfamily. It can be expressed as full-length, membrane-bound RAGE isoform 1 or as a secreted sRAGE protein that lacks a transmembrane domain (1). RAGE is detected during early developmental stages and in the lung under normal physiological conditions (2), and it is upregulated at sites of inflammation (3). Advanced glycation end products (AGEs) and a variety of other ligands interact with this receptor (1). Ligand binding activates full-length RAGE and initiates downstream signaling pathways that include activation of NF-κB, which leads to production of pro-inflammatory cytokines and inflammation (4). Activation of these pathways has been implicated in various disease states including Alzheimer's disease, diabetes, arthritis, and atherosclerosis (4). Soluble RAGE can competitively bind RAGE ligands in the extracellular environment, which prevents ligand interaction with full-length RAGE at the cell surface (1).

Background References

1. Bierhaus, A. et al. (2005) *J Mol Med* 83, 876-86.
2. Brett, J. et al. (1993) *Am J Pathol* 143, 1699-712.
3. Sparvero, L.J. et al. (2009) *J Transl Med* 7, 17.
4. Lin, L. et al. (2009) *Front Biosci* 14, 1403-13.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat

Trademarks and Patents

Limited Uses

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