

RAGE (C-20): sc-8229

BACKGROUND

Advanced glycosylation end products of proteins (AGEs) are nonenzymatically glycosylated proteins that are associated with a variety of conditions, including diabetes and other vascular disorders, as well as amyloidosis. These proteins regulate cellular functions via specific cell surface acceptor molecules, such as RAGE (receptor for advanced glycosylation End products). RAGE is a type 1 membrane protein that is found on the surface of endothelial cells, mononuclear phagocytes and vascular smooth muscle cells. Binding of AGEs to RAGE results in the induction of cellular oxidant stress and activation of the transcription factor NF κ B. Evidence suggests that the induction of oxidant stress results in the activation of an intracellular cascade involving p21 Ras and MAP kinase, which leads to activation of transcription.

REFERENCES

1. Neeper, M., et al. 1992. Cloning and expression of a cell surface receptor for advanced glycosylation end products of proteins. *J. Biol. Chem.* 267: 14998-15004.
2. Yan, S.D., et al. 1994. Enhanced cellular oxidant stress by the interaction of advanced glycation end products with their receptors/binding proteins. *J. Biol. Chem.* 269: 9889-9897.

CHROMOSOMAL LOCATION

Genetic locus: AGER (human) mapping to 6p21.32; Ager (mouse) mapping to 17 B1.

SOURCE

RAGE (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of RAGE of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-8229 P, (100 μ g, peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

RAGE (C-20) is recommended for detection of RAGE of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for RAGE siRNA (h): sc-36374, RAGE siRNA (m): sc-36375, RAGE shRNA Plasmid (h): sc-36374-SH, RAGE shRNA Plasmid (m): sc-36375-SH, RAGE shRNA (h) Lentiviral Particles: sc-36374-V and RAGE shRNA (m) Lentiviral Particles: sc-36375-V.

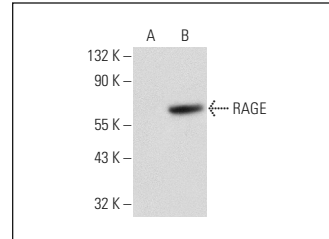
Molecular Weight of RAGE: 46 kDa.

Positive Controls: mouse lung extract: sc-2390, rat lung extract: sc-2396 and RAGE (h2): 293T Lysate: sc-170841.

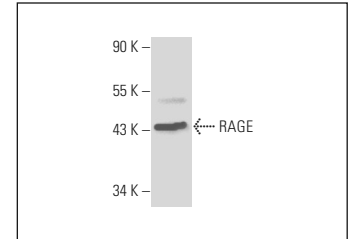
STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



RAGE (C-20): sc-8229. Western blot analysis of RAGE expression in non-transfected: sc-117752 (A) and human RAGE transfected: sc-170841 (B) 293T whole cell lysates.



RAGE (C-20): sc-8229. Western blot analysis of RAGE expression in mouse lung tissue extract.

SELECT PRODUCT CITATIONS

1. Yonekura, H., et al. 2003. Novel splice variants of the receptor for advanced glycation end-products expressed in human vascular endothelial cells and pericytes, and their putative roles in diabetes-induced vascular injury. *Biochem. J.* 370: 1097-1109.
2. Cheng, C., et al. 2005. Expression profiling of endogenous secretory receptor for advanced glycation end products in human organs. *Mod. Pathol.* 18: 1385-1396.
3. Kume, S., et al. 2005. Advanced glycation end-products attenuate human mesenchymal stem cells and prevent cognate differentiation into adipose tissue, cartilage, and bone. *J. Bone Miner. Res.* 20: 1647-1658.
4. Qin, J., et al. 2008. Expression of the receptor for advanced glycation end products in oligodendrocytes in response to oxidative stress. *J. Neurosci. Res.* 86: 2414-2422.
5. Beccafico, S., et al. 2010. Human muscle satellite cells show age-related differential expression of S100B protein and RAGE. *Age* 33: 523-541.
6. Lu, L., et al. 2011. Effects of atorvastatin on progression of diabetic nephropathy and local RAGE and soluble RAGE expressions in rats. *J. Zhejiang Univ. Sci. B* 12: 652-659.
7. Zhang, J., et al. 2012. Therapeutic effects of ethyl pyruvate on tumor-growth and metastasis in a severe combined immunodeficiency mouse orthotopic implantation model. *Eur. J. Inflamm.* 10: 25.

RESEARCH USE

For research use only, not for use in diagnostic procedures.



Try **RAGE (A-9): sc-365154** or **RAGE (RD9C 2): sc-33662**, our highly recommended monoclonal alternatives to RAGE (C-20). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **RAGE (A-9): sc-365154**.