

RAGE (N-16): sc-8230

BACKGROUND

Advanced glycosylation end products of proteins (AGEs) are non-enzymatically 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.

CHROMOSOMAL LOCATION

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

SOURCE

RAGE (N-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-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-8230 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

RAGE (N-16) 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), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

RAGE (N-16) is also recommended for detection of RAGE in additional species, including bovine and porcine.

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.

STORAGE

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

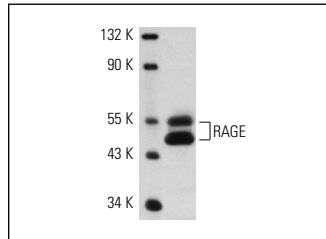
PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

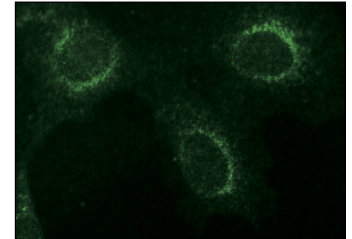
RESEARCH USE

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

DATA



RAGE (N-16): sc-8230. Western blot analysis of RAGE expression in mouse lung tissue extract.



RAGE (N-16): sc-8230. Immunofluorescence staining of expression in mouse lung tissue extract.

SELECT PRODUCT CITATIONS

1. Sorci, G., et al. 2004. Amphoterin stimulates myogenesis and counteracts the antimyogenic factors basic fibroblast growth factor and S100B via RAGE binding. *Mol. Cell. Biol.* 24: 4880-4894.
2. Konishi, H., et al. 2004. Advanced glycation end products induce secretion of chemokines and apoptosis in human first trimester trophoblasts. *Hum. Reprod.* 19: 2156-2162.
3. Fukami, K., et al. 2004. AGEs activate mesangial TGF- β -Smad signaling via an angiotensin II type I receptor interaction. *Kidney Int.* 66: 2137-2147.
4. Rouhiainen, A., et al. 2004. Regulation of monocyte migration by amphoterin (HMGB1). *Blood* 104: 1174-1182.
5. Sourris, K.C., et al. 2010. Modulation of the cellular expression of circulating advanced glycation end-product receptors in type 2 diabetic nephropathy. *Exp. Diabetes Res.* 2010: 974681.
6. Hoppmann, S., et al. 2010. Scavenger receptors are associated with cellular interactions of S100A12 *in vitro* and *in vivo*. *Int. J. Biochem. Cell Biol.* 42: 651-661.
7. Floden, A.M., et al. 2011. Microglia demonstrate age-dependent interaction with amyloid- β fibrils. *J. Alzheimers Dis.* 25: 279-293.
8. Cunha, C., et al. 2011. Genetically-determined hyperfunction of the S100B/RAGE axis is a risk factor for aspergillosis in stem cell transplant recipients. *PLoS ONE* 11: e27962.
9. Van Crombruggen, K., et al. 2012. RAGE processing in chronic airway conditions: involvement of *Staphylococcus aureus* and ECP. *J. Allergy Clin. Immunol.* 129: 1515-1521.


 MONOS
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