SANTA CRUZ BIOTECHNOLOGY, INC.

RAGE (D-5): sc-74535

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 NFκB. 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 (D-5) is a mouse monoclonal antibody raised against amino acids 1-300 of RAGE of human origin.

PRODUCT

Each vial contains 200 µg IgG_3 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

RESEARCH USE

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

APPLICATIONS

RAGE (D-5) is recommended for detection of RAGE of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for RAGE siRNA (h): sc-36374, RAGE siRNA (m): sc-36375, RAGE siRNA (r): sc-106985, RAGE shRNA Plasmid (h): sc-36374-SH, RAGE shRNA Plasmid (m): sc-36375-SH, RAGE shRNA Plasmid (r): sc-106985-SH, RAGE shRNA (h) Lentiviral Particles: sc-36374-V, RAGE shRNA (m) Lentiviral Particles: sc-36375-V and RAGE shRNA (r) Lentiviral Particles: sc-106985-V.

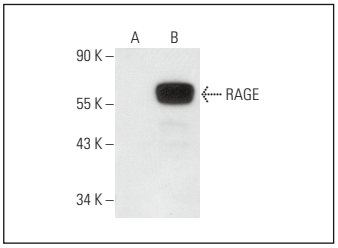
Molecular Weight of RAGE: 46 kDa.

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

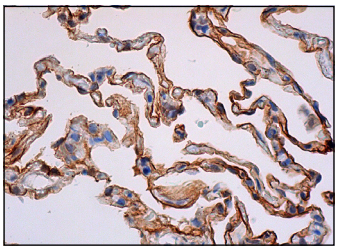
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



RAGE (D-5): sc-74535. Western blot analysis of RAGE expression in non-transfected: sc-117752 (**A**) and human RAGE transfected: sc-170841 (**B**) 293T whole cell lysates.



RAGE (D-5): sc-74535. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lung tissue showing membrane staining of pneumocytes and macrophages.

SELECT PRODUCT CITATIONS

1. Wu, J., et al. 2010. Pentoxifylline alleviates high-fat diet-induced non-alcoholic steatohepatitis and early atherosclerosis in rats by inhibiting AGE and RAGE expression. Acta Pharmacol. Sin. 31: 1367-1375.
2. Liang, Y.J., et al. 2010. Advanced glycation end products-induced apoptosis attenuated by PPARδ activation and epigallocatechin gallate through NFκB pathway in human embryonic kidney cells and human mesangial cells. Diabetes Metab. Res. Rev. 26: 406-416.
3. Liang, Y.J., et al. 2011. Peroxisome proliferator-activated receptor δ down-regulates the expression of the receptor for advanced glycation end products and pro-inflammatory cytokines in the kidney of streptozotocin-induced diabetic mice. Eur. J. Pharm. Sci. 43: 65-70.
4. Su, R.C., et al. 2022. Topical application of *Antrodia cinnamomea* ointment in diabetic wound healing. Life 12: 507.
5. Chen, C.J., et al. 2022. Metformin mitigated obesity-driven cancer aggressiveness in tumor-bearing mice. Int. J. Mol. Sci. 23: 9134.