SANTA CRUZ BIOTECHNOLOGY, INC.

RAGE (M-20): sc-8231

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 (mouse) mapping to 17 B1.

SOURCE

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

PRODUCT

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

Blocking peptide available for competition studies, sc-8231 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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 (M-20) is recommended for detection of RAGE of mouse and rat origin by Western Blotting (starting dilution 1:200, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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

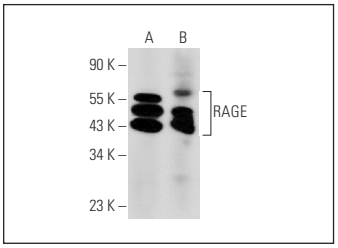
Molecular Weight of RAGE: 46 kDa.

Positive Controls: KNRK whole cell lysate: sc-2214, mouse lung extract: sc-2390 or rat lung extract: sc-2396.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



RAGE (M-20): sc-8231. Western blot analysis of RAGE expression in mouse lung (**A**) and rat lung (**B**) tissue extracts.

SELECT PRODUCT CITATIONS

1. Huang, J.S., et al. 2001. Role of receptor for advanced glycation end-product (RAGE) and the JAK/Stat-signaling pathway in AGE-induced collagen production in NRK-49F cells. J. Cell. Biochem. 81: 102-113.
2. 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.
3. Beauchamp, M.C., et al. 2004. Advanced glycation end products potentiate the stimulatory effect of glucose on macrophage lipoprotein lipase expression. J. Lipid Res. 45: 1749-1757.
4. Greco, R., et al. 2012. Modulation of RAGE isoforms expression in the brain and plasma of rats exposed to transient focal cerebral ischemia. Neurochem. Res. 37: 1508-1516.
5. Biedron, R., et al. 2015. Oxidation by neutrophils-derived HOCl increases immunogenicity of proteins by converting them into ligands of several endocytic receptors involved in antigen uptake by dendritic cells and macrophages. PLoS ONE 10: e0123293.