

RAGE (h2): 293T Lysate: sc-170841

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. Nepper, 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.
3. Schmidt, A.M., et al. 1996. RAGE: a novel cellular receptor for advanced glycation end products. *Diabetes* 3: S77-S80.
4. Miyata, T., et al. 1996. The receptor for advanced glycation end products (RAGE) is a central mediator of the interaction of AGE- β 2microglobulin with mononuclear phagocytes via an oxidant-sensitive pathway. Implications for the pathogenesis of dialysis-related amyloidosis. *J. Clin. Invest.* 98: 1088-1094.
5. Chappey, O., et al. 1997. Advanced glycation end products, oxidant stress and vascular lesions. *Eur. J. Clin. Invest.* 27: 97-108.
6. Li, J., et al. 1997. Characterization and functional analysis of the promoter of RAGE, the receptor for advanced glycation end products. *J. Biol. Chem.* 272: 16498-16506.
7. Lander, H.M., et al. 1997. Activation of the receptor for advanced glycation end products triggers a p21 (Ras)-dependent mitogen-activated protein kinase pathway regulated by oxidant stress. *J. Biol. Chem.* 272: 17810-17814.

CHROMOSOMAL LOCATION

Genetic locus: AGER (human) mapping to 6p21.32.

PRODUCT

RAGE (h2): 293T Lysate represents a lysate of human RAGE transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

RAGE (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive RAGE antibodies. Recommended use: 10-20 μ l per lane.

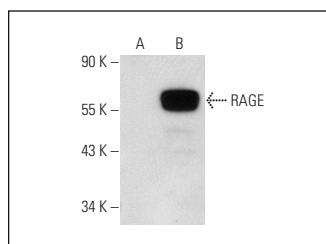
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

RAGE (D-5): sc-74535 is recommended as a positive control antibody for Western Blot analysis of enhanced human RAGE expression in RAGE transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

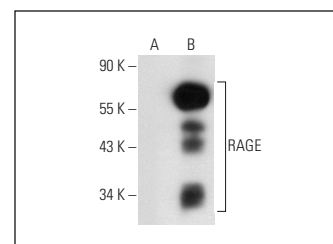
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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.

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 (A11): sc-80652. Western blot analysis of RAGE expression in non-transfected: sc-117752 (A) and human RAGE transfected: sc-170841 (B) 293T whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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