Anti-Human RAGE Antibody [PSH20-64] - BSA and Azide free (Detector)

HA725290

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	ELISA(Det)
Clone number:	PSH20-64

Description: 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 NFkB. 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.

Immunogen: Recombinant protein within Recombinant Human RAGE aa 23-342 (HA211263).

Positive control: Recombinant Human RAGE protein (HA211263).

Subcellular location: Cell membrane, Secreted.

Database links: SwissProt: Q15109 Human

Recommended Dilutions:

ELISA(Det) Use at an assay dependent concentration. Can be paired for Sandwich ELISA with Rabbit monoclonal [PSH20-63] to Human RAGE antibody (Capture) (HA725289) and Recombinant Human RAGE protein (HA211263) as the standard. The reference range value is 19.5-2,500 pg/mL.

Storage Buffer: 1*PBS (pH7.4).

Storage Instruction: Store at +4℃ after thawing. Aliquot store at -20℃. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

Images

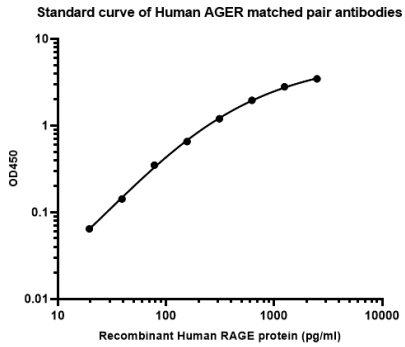

Fig1: Sandwich ELISA analysis of Human AGER matched pair antibodies

Capture: HA725289, Human RAGE Rabbit mAb [PSH20-63]
Detector: HA725290, Human RAGE Rabbit mAb [PSH20-64]

Elisa assay was performed by coating wells of a 96-well plate with 100 µl per well of capture antibody (HA725289) diluted in carbonate/bicarbonate buffer, at a concentration of 2 µg/mL overnight at 4℃. Wells of the plate were washed, blocked with 150 µl 0.05% tween-20 1% BSA blocking buffer, and incubated with serial diluted Recombinant Human RAGE protein (HA211263) starting from10,000 pg/ml to 0 pg/ml and detect antibody (HA725290, Biotin, 0.2 µg/ml) for 1 hour at 30℃ with shaking. Then the plate was washed and incubated with 100 µl per well of SA-HRP for 0.5 hour at 30℃ with shaking. Detection was performed using an Ultra TMB Substrate for 10 minutes at room temperature in the dark. The reaction was stopped with sulfuric acid and absorbances were read on a spectrophotometer at 450 nm.

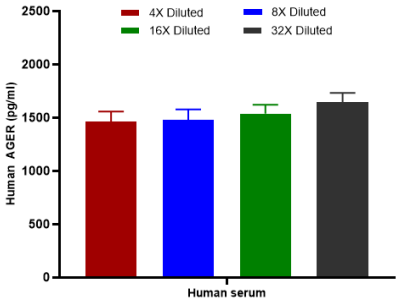

Fig2: Interpolated concentrations of native AGER in human serum samples.

Capture: HA725289, Human RAGE Rabbit mAb [PSH20-63]
Detector: HA725290, Human RAGE Rabbit mAb [PSH20-64]

The concentrations of AGER were measured in duplicates, interpolated from the AGER standard curve and corrected for sample dilution. Undiluted samples are human serum 100%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean AGER concentration was determined to be 1560 pg/ml in human serum.

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Kim J et al. Cytoplasmic translocation of high-mobility group box-1 protein is induced by diabetes and high glucose in retinal pericytes. Mol Med Rep 14:3655-61 (2016).
2. Yao X et al. Mitochondrial ROS Induces Cardiac Inflammation via a Pathway through mtDNA Damage in a Pneumonia-Related Sepsis Model. PLoS One 10:e0139416 (2015).