Anti-Human REST Antibody [PSH21-38] - BSA and Azide free (Capture)

HA725193

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	ELISA(Cap)
Clone number:	PSH21-38

Description: Transcriptional repressor which binds neuron-restrictive silencer element (NRSE) and represses neuronal gene transcription in non-neuronal cells. Restricts the expression of neuronal genes by associating with two distinct corepressors, SIN3A and RCOR1, which in turn recruit histone deacetylase to the promoters of REST-regulated genes. Mediates repression by recruiting the BHC complex at RE1/NRSE sites which acts by deacetylating and demethylating specific sites on histones, thereby acting as a chromatin modifier. Transcriptional repression by REST-CDYL via the recruitment of histone methyltransferase EHMT2 may be important in transformation suppression. Represses the expression of SRRM4 in non-neural cells to prevent the activation of neural-specific splicing events and to prevent production of REST isoform 3. Repressor activity may be inhibited by forming heterodimers with isoform 3, thereby preventing binding to NRSE or binding to corepressors and leading to derepression of target genes. Also maintains repression of neuronal genes in neural stem cells, and allows transcription and differentiation into neurons by dissociation from RE1/NRSE sites of target genes. Thereby is involved in maintaining the quiescent state of adult neural stem cells and preventing premature differentiation into mature neurons.

Immunogen: Recombinant protein within Recombinant Human REST aa 801-1097 (HA211258).

Positive control: Recombinant Human REST protein (HA211258).

Subcellular location: Nucleus, Cytoplasm.

Database links: SwissProt: Q13127 Human

Recommended Dilutions:

ELISA(Cap) Use at an assay dependent concentration. Can be paired for Sandwich ELISA with Rabbit monoclonal [PSH21-39] to Human REST antibody (Detector) (HA725194) and Recombinant Human REST protein (HA211258) as the standard. The reference range value is 78.1-10,000 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

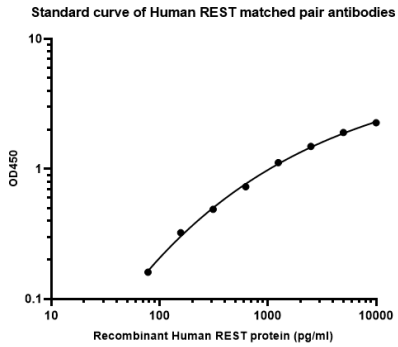

Fig1: Sandwich ELISA analysis of Human REST matched pair antibodies

Capture: HA725193, Human REST Rabbit mAb [PSH21-38]
Detector: HA725194, Human REST Rabbit mAb [PSH21-39]

Elisa assay was performed by coating wells of a 96-well plate with 50 µl per well of capture antibody (HA725193) 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 REST protein (HA211258) starting from 2,000 pg/ml to 0 pg/ml and detect antibody (HA725194, Biotin, 0.2 µg/ml) for 1 hour at 30℃ with shaking. Then the plate was washed and incubated with 50 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.

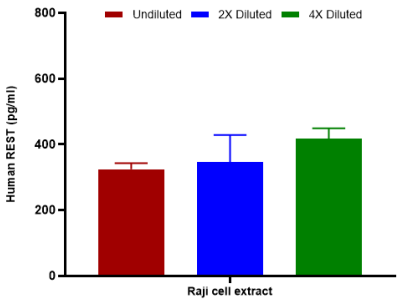

Fig2: Interpolated concentrations of native REST in Raji extract samples based on a 1,000 µg/ml extract load.

Capture: HA725193, Human REST Rabbit mAb [PSH21-38]
Detector: HA725194, Human REST Rabbit mAb [PSH21-39]

The concentrations of REST were measured in duplicates, interpolated from the REST standard curve and corrected for sample dilution. Undiluted samples are Raji extract 100%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean REST concentration was determined to be 362.650 pg/ml in Raji extract.

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

Background References

1. Li H. et. al. The deficiency of NRSF/REST enhances the pro-inflammatory function of astrocytes in a model of Parkinson's disease. Biochim Biophys Acta Mol Basis Dis. 2020 Jan
2. Zhao Y. et. al. Brain REST/NRSF Is Not Only a Silent Repressor but Also an Active Protector. Mol Neurobiol. 2017 Jan