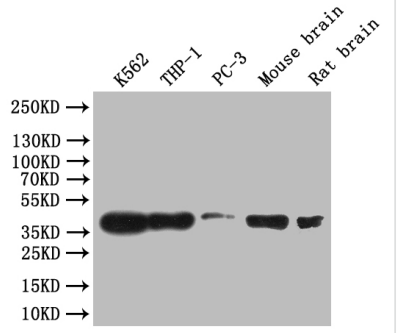
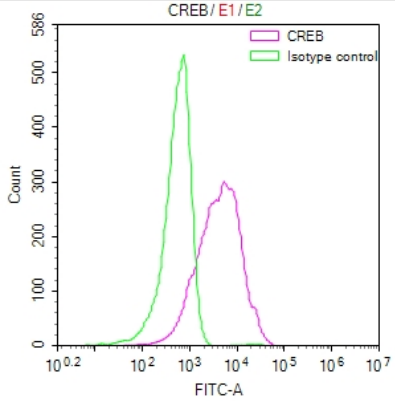
CREB1 Recombinant Monoclonal Antibody

Product Code	CSB-RA081853A0HU
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P16220
Immunogen	A synthesized peptide derived from Human CREB1
Species Reactivity	Human, Mouse, Rat
Tested Applications	ELISA, WB, FC; Recommended dilution: WB:1:500-1:2000, FC:1:50-1:200
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Product Type	Recombinant Antibody
Immunogen Species	Homo sapiens (Human)
Research Area	Epigenetics and Nuclear Signaling;Immunology
Gene Names	CREB1
Clone No.	21E3

Image



Western Blot
Positive WB detected in: K562 whole cell lysate, THP-1 whole cell lysate, Mouse brain tissue lysate, Rat brain tissue lysate,
All lanes: CREB antibody at 1:1000
Secondary
Goat polyclonal to rabbit IgG at 1/50000 dilution
Predicted band size: 36 kDa
Observed band size: 36 kDa



Overlay Peak curve showing Jurkat cells stained with CSB-RA081853A0HU (red line) at 1:50. The cells were fixed in 4% formaldehyde and permeated by 0.2% TritonX-100. Then 10% normal goat serum to block non-specific protein-protein interactions followed by the antibody (1μg/1*10^{6}cells) for 45min at 4?. The secondary antibody used was FITC-conjugated Goat Anti-rabbit IgG(H+L) at 1:200 dilution for 35min at 4?.Control antibody (green line) was rabbit IgG (1μg/1*10^{6}cells) used under the same conditions. Acquisition of >10,000 events was performed.

Description

CUSABIO's approach to developing a recombinant monoclonal antibody against CREB1 commenced with the immunization of a rabbit using a synthesized peptide from human CREB1 protein. B cells were subsequently isolated from the immunized rabbit, and RNA was extracted from these B cells. The extracted RNA was reverse-transcribed into cDNA, which served as a template for extending CREB1 antibody genes using degenerate primers. The engineered CREB1 antibody genes were incorporated into a plasmid vector and transfected into host cells for expression. The resulting CREB1 recombinant monoclonal antibody was then purified from the cell culture supernatant using affinity chromatography. Its suitability for ELISA, WB, and FC applications was confirmed, demonstrating specific reactivity with CREB1 proteins from human, mouse, and rat species.

CREB1 is a crucial transcription factor that regulates gene expression in response to a wide range of signals and stimuli. Its roles extend to various physiological processes, including learning and memory, cell growth and differentiation, metabolism, and the cellular response to stress.