

Phospho-CREB1-S133

Reactivity: Human Mouse Rat

Tested applications: WB IHC IP

Recommended Dilution: WB 1:500 - 1:2000 IHC 1:50 - 1:200 IP 1:20 - 1:50

Calculated MW: 43kDa

Observed MW: Refer to Figures

Immunogen:

A phospho specific peptide corresponding to residues surrounding S133 of human CREB1

Storage Buffer:

Store at -20. Avoid freeze / thaw cycles. Buffer: PBS with 0.02% sodium azide, 50% glycerol, pH7.3.

Concentration:

hikq

Synonym:

CREB; MGC9284;

Catalog #: AP0118

Antibody Type:

Polyclonal Antibody

Species: Rabbit

Gene ID: 1385

Isotype: IgG

Swiss Prot: P16220

Purity: Affinity purification

For research use only.

Background:

CREB1, also named as CREB, belongs to the bZIP family, containing one bZIP domain and one KID (kinase-inducible) domain. This protein binds the cAMP response element (CRE), a sequence present in many viral and cellular promoters. CREB stimulates transcription on binding to the CRE. This protein is stimulated by phosphorylation. Phosphorylation of both Ser-133 and Ser-142 in the SCN regulates the activity of CREB and participates in circadian rhythm generation.

Phosphorylation of Ser-133 allows CREBBP binding. Transcription activation is enhanced by the TORC coactivators which act independently of Ser-133 phosphorylation. CREB1 is sumoylated by SUMO1. Sumoylation on Lys-304, but not on Lys-285, is required for nuclear localization of this protein. Sumoylation is enhanced under hypoxia, promoting nuclear localization and stabilization. Defects in CREB1 may be a cause of angiomatoid fibrous histiocytoma (AFH), a distinct variant of malignant fibrous histiocytoma that typically occurs in children and adolescents and is manifest by nodular subcutaneous growth. A chromosomal aberration involving CREB1 is found in a patient with angiomatoid fibrous histiocytoma. Translocation t(2;22)(q33;q12) with CREB1 generates a EWSR1/CREB1 fusion gene that is most common genetic abnormality in this tumor type.

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