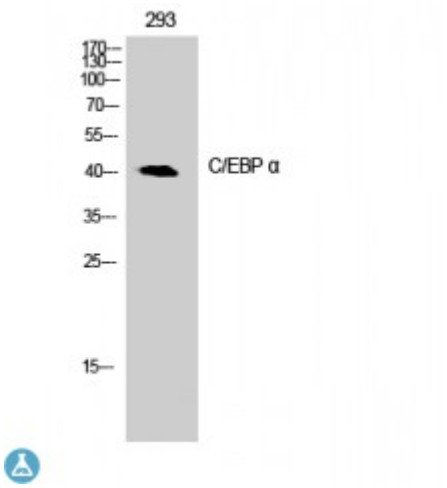
Anti-C/EBP alpha antibody



Description	Rabbit polyclonal to C/EBP alpha.

Model	STJ91916
Host	Rabbit
Reactivity	Human, Mouse, Rat
Applications	ELISA, IHC, WB
Immunogen	Synthesized peptide derived from human C/EBP alpha around the non-phosphorylation site of S21.
Immunogen Region	1-80 aa
Gene ID	1050
Gene Symbol	CEBPA
Dilution range	WB 1:500-1:2000IHC 1:100-1:300ELISA 1:5000
Specificity	C/EBP alpha Polyclonal Antibody detects endogenous levels of C/EBP alpha protein.
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Note	For Research Use Only (RUO).
Protein Name	CCAAT/enhancer-binding protein alpha C/EBP alpha
Molecular Weight	42/30 kDa
Clonality	Polyclonal
Conjugation	Unconjugated

Isotype	IgG
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Concentration	1 mg/ml
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:1833OMIM:116897
Alternative Names	CCAAT/enhancer-binding protein alpha C/EBP alpha
Function	Transcription factor that coordinates proliferation arrest and the differentiation of myeloid progenitors, adipocytes, hepatocytes, and cells of the lung and the placenta. Binds directly to the consensus DNA sequence 5'-T[TG]NNGNAA[TG]-3' acting as an activator on distinct target genes . During early embryogenesis, plays essential and redundant functions with CEBPB. Essential for the transition from common myeloid progenitors (CMP) to granulocyte/monocyte progenitors (GMP). Critical for the proper development of the liver and the lung . Necessary for terminal adipocyte differentiation, is required for postnatal maintenance of systemic energy homeostasis and lipid storage . To regulate these different processes at the proper moment and tissue, interplays with other transcription factors and modulators. Downregulates the expression of genes that maintain cells in an undifferentiated and proliferative state through E2F1 repression, which is critical for its ability to induce adipocyte and granulocyte terminal differentiation. Reciprocally E2F1 blocks adipocyte differentiation by binding to specific promoters and repressing CEBPA binding to its target gene promoters. Proliferation arrest also depends on a functional binding to SWI/SNF complex . In liver, regulates gluconeogenesis and lipogenesis through different mechanisms. To regulate gluconeogenesis, functionally cooperates with FOXO1 binding to IRE-controlled promoters and regulating the expression of target genes such as PCK1 or G6PC. To modulate lipogenesis, interacts and transcriptionally synergizes with SREBF1 in promoter activation of specific lipogenic target genes such as ACAS2. In adipose tissue, seems to act as FOXO1 coactivator accessing to ADIPOQ promoter through FOXO1 binding sites . Isoform 3: Can act as dominant-negative. Binds DNA and have transctivation activity, even if much less efficiently than isoform 2. Does not inhibit cell proliferation . Isoform 4: Directly and specifically enhances ribosomal DNA transcription interacting with RNA polymerase I-specific cofactors and inducing histone acetylation.
Sequence and Domain Family	The recognition sequence (54-72) is required for interaction with TRIB1.
Cellular Localization	Nucleus Isoform 4: Nucleus, nucleolus
Post-translational Modifications	Phosphorylation at Ser-190 is required for interaction with CDK2, CDK4 and SWI/SNF complex leading to cell cycle inhibiton. Dephosphorylated at Ser-190 by protein phosphatase 2A (PP2A) through PI3K/AKT signaling pathway regulation . Phosphorylation at Thr-226 and Thr-230 by GSK3 is constitutive in adipose tissue and lung. In liver, both Thr-226 and Thr-230 are phosphorylated only during feeding but not during fasting. Phosphorylation of the GSK3 consensus sites selectively decreases transactivation activity on IRE-controlled promoters. Sumoylated, sumoylation blocks the inhibitory effect on cell proliferation by disrupting the interaction with SMARCA2. Ubiquitinated by RFWD2/COP1 upon interaction with TRIB1.

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