

ARG66798 anti-C / EBP alpha antibody

Package: 100 µl
Store at: -20°C

Summary

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| Product Description | Rabbit Polyclonal antibody recognizes C / EBP alpha |
| Tested Reactivity | Hu, Ms, Rat |
| Tested Application | IHC-P, WB |
| Host | Rabbit |
| Clonality | Polyclonal |
| Isotype | IgG |
| Target Name | C / EBP alpha |
| Species | Human |
| Immunogen | KLH-conjugated synthetic peptide within the N-terminal region of Human C/EBP alpha. |
| Conjugation | Un-conjugated |
| Alternate Names | C/EBP-alpha; C/EBP alpha; CCAAT/enhancer-binding protein alpha; CEBP |

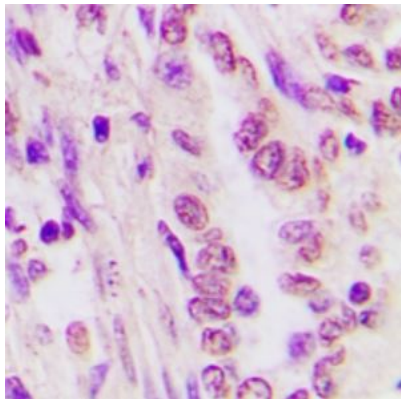
Application Instructions

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|-------------------|---|----------------|
| Application table | Application | Dilution |
| | IHC-P | 1:50 - 1:100 |
| | WB | 1:500 - 1:1000 |
| Application Note | IHC-P: Antigen Retrieval: Heat mediation was performed in Sodium citrate buffer (pH 6.0). * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist. | |
| Observed Size | ~ 43 kDa | |

Properties

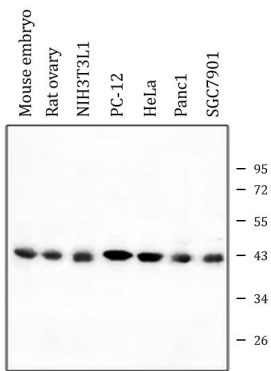
| | |
|---------------------|---|
| Form | Liquid |
| Purification | Affinity purification with immunogen. |
| Buffer | 0.42% Potassium phosphate (pH 7.3), 0.87% NaCl, 0.01% Sodium azide and 30% Glycerol. |
| Preservative | 0.01% Sodium azide |
| Stabilizer | 30% Glycerol |
| Storage instruction | For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use. |
| Note | For laboratory research only, not for drug, diagnostic or other use. |

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| Gene Symbol | CEBPA |
| Gene Full Name | CCAAT/enhancer binding protein (C/EBP), alpha |
| Background | This intronless gene encodes a transcription factor that contains a basic leucine zipper (bZIP) domain and recognizes the CCAAT motif in the promoters of target genes. The encoded protein functions in homodimers and also heterodimers with CCAAT/enhancer-binding proteins beta and gamma. Activity of this protein can modulate the expression of genes involved in cell cycle regulation as well as in body weight homeostasis. Mutation of this gene is associated with acute myeloid leukemia. The use of alternative in-frame non-AUG (GUG) and AUG start codons results in protein isoforms with different lengths. Differential translation initiation is mediated by an out-of-frame, upstream open reading frame which is located between the GUG and the first AUG start codons. [provided by RefSeq, Dec 2013] |
| Function | <p>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 (PubMed:11242107). 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 (By similarity). Necessary for terminal adipocyte differentiation, is required for postnatal maintenance of systemic energy homeostasis and lipid storage (By similarity). 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 (PubMed:14660596). 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 (By similarity).</p> <p>[Isoform 3]: Can act as dominant-negative. Binds DNA and have transactivation activity, even if much less efficiently than isoform 2. Does not inhibit cell proliferation (PubMed:14660596).</p> <p>[Isoform 4]: Directly and specifically enhances ribosomal DNA transcription interacting with RNA polymerase I-specific cofactors and inducing histone acetylation. [UniProt]</p> |
| Calculated Mw | 38 kDa |
| PTM | <p>Phosphorylation at Ser-190 is required for interaction with CDK2, CDK4 and SWI/SNF complex leading to cell cycle inhibition. Dephosphorylated at Ser-190 by protein phosphatase 2A (PP2A) through PI3K/AKT signaling pathway regulation (PubMed:15107404). 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.</p> <p>Sumoylated, sumoylation blocks the inhibitory effect on cell proliferation by disrupting the interaction with SMARCA2.</p> <p>Ubiquitinated by RFW2/COP1 upon interaction with TRIB1. [UniProt]</p> |
| Cellular Localization | Nucleus. Isoform 4: Nucleus, nucleolus. [UniProt] |



ARG66798 anti-C/EBP alpha antibody IHC-P image

Immunohistochemistry: Formalin-fixed and paraffin-embedded Human lung cancer tissue. Antigen Retrieval: Heat mediation was performed in Sodium citrate buffer (pH 6.0). The tissue section was stained with ARG66798 anti-C/EBP alpha antibody at room temperature. The section was counterstained with haematoxylin and mounted with DPX.



ARG66798 anti-C/EBP alpha antibody WB image

Western blot: Mouse embryo, Rat ovary, NIH3T3L1, PC-12, HeLa, Panc1 and SGC7901 whole cell lysates stained with ARG66798 anti-C/EBP alpha antibody.