

# Anti-CEBP alpha Antibody [PSH19-55]

HA724081



**Product Type:** Recombinant Rabbit monoclonal IgG, primary antibodies

**Species reactivity:** Human, Mouse, Rat

**Applications:** WB, IF-Cell, IHC-P, FC, IP

**Molecular Wt:** Predicted band size: 38 kDa

**Clone number:** PSH19-55

**Description:** The transcription factor C/EBP  $\alpha$  (CCAAT-enhancer binding protein) is a heat-stable, sequence-specific DNA-binding protein that binds avidly to several different cis-regulatory DNA sequences commonly associated with viral and cellular genes transcribed by RNA polymerase II. C/EBP  $\alpha$  regulates gene expression in a variety of tissues including liver, adipose, lung and intestine. C/EBP  $\alpha$  is a basic region/leucine zipper transcription factor selectively expressed during the differentiation of liver, adipose tissue, blood cells and the endocrine pancreas. C/EBP  $\alpha$  uses a bipartite structural motif to bind DNA and appears to function exclusively in terminally differentiated, growth-arrested cells. In the liver, C/EBP  $\alpha$  is a transactivator of several genes, which are regulated by growth hormone. Growth hormone enhances not only the levels of C/EBP  $\alpha$  mRNA and protein, but also the DNA binding activity of C/EBP  $\alpha$ . C/EBP  $\alpha$  functions as an important transcription factor that regulates different genes, including prolactin gene expression.

**Positive control:** THP-1 cell lysate, mouse liver tissue, mouse spleen tissue, rat liver tissue, rat spleen tissue, THP-1.

**Subcellular location:** Nucleus, nucleolus.

**Database links:** SwissProt: P49715 Human | P53566 Mouse | P05554 Rat

**Recommended Dilutions:**

WB 1:20,000

IF-Cell 1:1,000

IHC-P 1:1,000

FC 1:1,000

IP 1-2 $\mu$ g/sample

**Storage Buffer:** PBS (pH7.4), 0.1% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

**Storage Instruction:** Shipped at 4°C. Store at +4°C short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20°C long term.

**Purity:** Protein A affinity purified.

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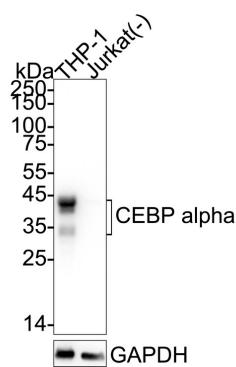
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## Images



**Fig1:** Western blot analysis of CEBP alpha on different lysates with Rabbit anti-CEBP alpha antibody (HA724081) at 1/20,000 dilution.

Lane 1: THP-1 cell lysate

Lane 2: Jurkat cell lysate (negative)

Lysates/proteins at 20 µg/Lane.

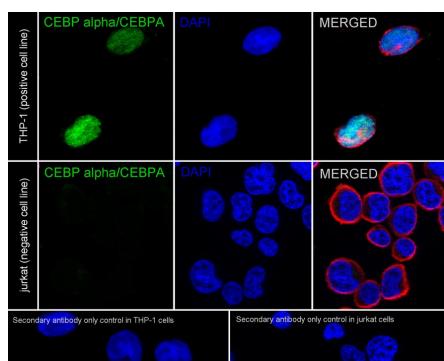
Predicted band size: 38 kDa

Observed band size: 30/42 kDa

Exposure time: 4 seconds; ECL: K1801;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA724081) at 1/20,000 dilution was used in primary antibody dilution (K1803) at 4°C overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.



**Fig2:** Immunocytochemistry analysis of THP-1 (positive) and Jurkat (negative) labeling CEBP alpha with Rabbit anti-CEBP alpha antibody (HA724081) at 1/1,000 dilution.

Cells were fixed in 4% paraformaldehyde for 15 minutes at room temperature, permeabilized with 0.1% Triton X-100 in PBS for 15 minutes at room temperature, then blocked with 1% BSA in 10% negative goat serum for 1 hour at room temperature. Cells were then incubated with Rabbit anti-CEBP alpha antibody (HA724081) at 1/1,000 dilution in 1% BSA in PBST overnight at 4 °C. Goat Anti-Rabbit IgG H&L (iFluor™ 488, HA1121) was used as the secondary antibody at 1/1,000 dilution. PBS instead of the primary antibody was used as the secondary antibody only control. Nuclear DNA was labelled in blue with DAPI.

Beta tubulin (HA601187, red) was stained at 1/100 dilution overnight at +4°C. Goat Anti-Mouse IgG H&L (iFluor™ 594, HA1126) was used as the secondary antibody at 1/1,000 dilution.

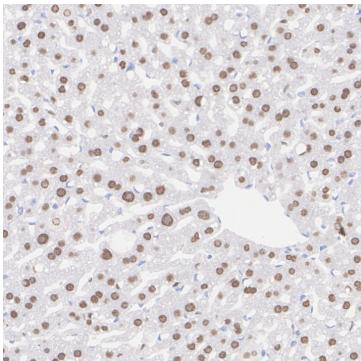
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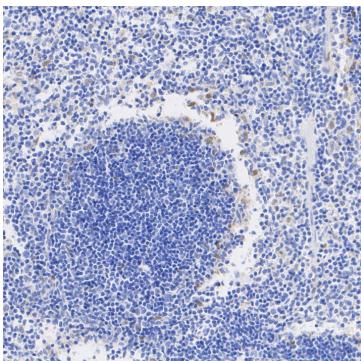
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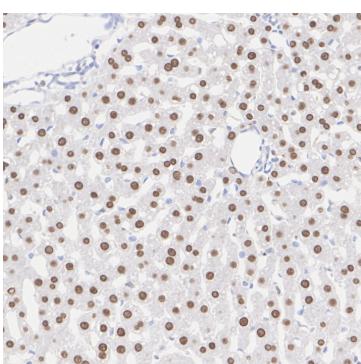
**Fig3:** Immunohistochemical analysis of paraffin-embedded mouse liver tissue with Rabbit anti-CEBP alpha antibody (HA724081) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH<sub>2</sub>O and PBS, and then probed with the primary antibody (HA724081) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.



**Fig4:** Immunohistochemical analysis of paraffin-embedded mouse spleen tissue with Rabbit anti-CEBP alpha antibody (HA724081) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH<sub>2</sub>O and PBS, and then probed with the primary antibody (HA724081) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.



**Fig5:** Immunohistochemical analysis of paraffin-embedded rat liver tissue with Rabbit anti-CEBP alpha antibody (HA724081) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH<sub>2</sub>O and PBS, and then probed with the primary antibody (HA724081) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

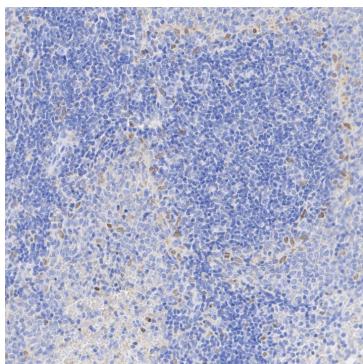
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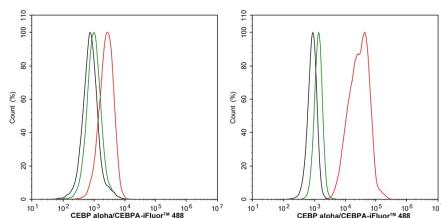
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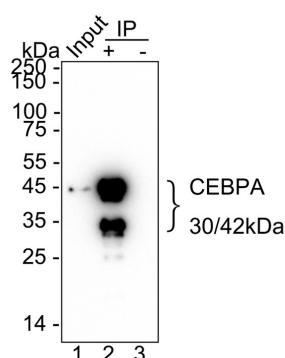
**Fig6:** Immunohistochemical analysis of paraffin-embedded rat spleen tissue with Rabbit anti-CEBP alpha antibody (HA724081) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH<sub>2</sub>O and PBS, and then probed with the primary antibody (HA724081) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

**Fig7:** Flow cytometric analysis of Jurkat (left, negative) and THP-1 (right, positive) cells labeling CEBP alpha.



Cells were fixed and permeabilized. Then stained with the primary antibody (HA724081, 1/1,000) (red) compared with Rabbit IgG Isotype Control (green). After incubation of the primary antibody at +4°C for an hour, the cells were stained with a iFluor™ 488 conjugate-Goat anti-Rabbit IgG Secondary antibody (HA1121) at 1/1,000 dilution for 30 minutes at +4°C. Unlabelled sample was used as a control (cells without incubation with primary antibody; black).



**Fig8:** CEBP alpha was immunoprecipitated from 0.2 mg THP-1 cell lysate with HA724081 at 2 µg/10 µl beads. Western blot was performed from the immunoprecipitate using HA724081 at 1/5,000 dilution. HRP Conjugated Anti-Rabbit IgG for IP Nano-secondary antibody at 1/5,000 dilution was used for 1 hour at room temperature.

Lane 1: THP-1 cell lysate (input)  
 Lane 2: HA724081 IP in THP-1 cell lysate  
 Lane 3: Rabbit IgG instead of HA724081 in THP-1 cell lysate

Blocking/Dilution buffer: primary antibody dilution (K1803)  
 Exposure time: 3 minutes; ECL: K1801

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

### Background References

1. Christou-Kent M et al. CEBPA phase separation links transcriptional activity and 3D chromatin hubs. *Cell Rep.* 2023 Aug
2. Georgi JA et al. Prognostic impact of CEBPA mutational subgroups in adult AML. *Leukemia.* 2024 Feb

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