abcam

Product datasheet

HRP Anti-NFkB p105 / p50 antibody [E381] ab195854

敲除验证 重组 RabMAb

3 References 3 图像

概述

产品名称	HRP Anti-NFkB p105 / p50抗体[E381]
描述	HRP兔单克隆抗体[E381] to NFkB p105 / p50
宿主	Rabbit
偶联物	HRP
经测试应用	**适用于:** WB
种属反应性	**与反应:** Human **预测可用于:** Mouse, Rat
免疫原	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
阳性对照	WB: HeLa whole cell lysate.
常规说明	Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

性能

形式	Liquid
存放说明	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle. Store In the Dark.
存储溶液	pH: 7.40 Preservative: 0.1% Proclin 300 Solution Constituents: 30% Glycerol (glycerin, glycerine), 1% BSA, PBS
纯度	Protein A purified
克隆	单克隆
克隆编号	E381
同种型	IgG

应用

The Abpromise guarantee	**Abpromise™承诺保证使用**ab195854**于以下的经测试应用**

“应用说明”部分 下显示的仅为推荐的起始稀释度;实际最佳的稀释度/浓度应由使用者检定。

应用	Ab评论	说明
WB		1/2000. Detects a band of approximately 50, 105 kDa (predicted molecular weight: 50 kDa).

靶标

功能

NF-kappa-B is a pleiotropic transcription factor which is present in almost all cell types and is involved in many biological processed such as inflammation, immunity, differentiation, cell growth, tumorigenesis and apoptosis. NF-kappa-B is a homo- or heterodimeric complex formed by the Rel-like domain-containing proteins RELA/p65, RELB, NFKB1/p105, NFKB1/p50, REL and NFKB2/p52 and the heterodimeric p65-p50 complex appears to be most abundant one. The dimers bind at kappa-B sites in the DNA of their target genes and the individual dimers have distinct preferences for different kappa-B sites that they can bind with distinguishable affinity and specificity. Different dimer combinations act as transcriptional activators or repressors, respectively. NF-kappa-B is controlled by various mechanisms of post-translational modification and subcellular compartmentalization as well as by interactions with other cofactors or corepressors. NF-kappa-B complexes are held in the cytoplasm in an inactive state complexed with members of the NF-kappa-B inhibitor (I-kappa-B) family. In a conventional activation pathway, I-kappa-B is phosphorylated by I-kappa-B kinases (IKKs) in response to different activators, subsequently degraded thus liberating the active NF-kappa-B complex which translocates to the nucleus. NF-kappa-B heterodimeric p65-p50 and RelB-p50 complexes are transcriptional activators. The NF-kappa-B p50-p50 homodimer is a transcriptional repressor, but can act as a transcriptional activator when associated with BCL3. NFKB1 appears to have dual functions such as cytoplasmic retention of attached NF-kappa-B proteins by p105 and generation of p50 by a cotranslational processing. The proteasome-mediated process ensures the production of both p50 and p105 and preserves their independent function, although processing of NFKB1/p105 also appears to occur post-translationally. p50 binds to the kappa-B consensus sequence 5'-GGRNNYYCC-3', located in the enhancer region of genes involved in immune response and acute phase reactions. In a complex with MAP3K8, NFKB1/p105 represses MAP3K8-induced MAPK signaling; active MAP3K8 is released by proteasome-dependent degradation of NFKB1/p105.

序列相似性

Contains 7 ANK repeats.
Contains 1 death domain.
Contains 1 RHD (Rel-like) domain.

结构域

The C-terminus of p105 might be involved in cytoplasmic retention, inhibition of DNA-binding, and transcription activation.
Glycine-rich region (GRR) appears to be a critical element in the generation of p50.

翻译后修饰

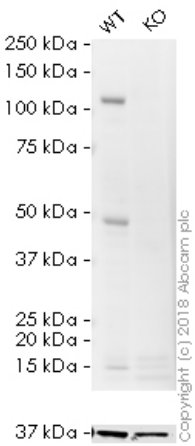
While translation occurs, the particular unfolded structure after the GRR repeat promotes the generation of p50 making it an acceptable substrate for the proteasome. This process is known as cotranslational processing. The processed form is active and the unprocessed form acts as an inhibitor (I kappa B-like), being able to form cytosolic complexes with NF-kappa B, trapping it in the cytoplasm. Complete folding of the region downstream of the GRR repeat precludes processing.
Phosphorylation at 'Ser-903' and 'Ser-907' primes p105 for proteolytic processing in response to TNF-alpha stimulation. Phosphorylation at 'Ser-927' and 'Ser-932' are required for BTRC/BTRCP-mediated proteolysis.

Polyubiquitination seems to allow p105 processing.
S-nitrosylation of Cys-61 affects DNA binding.

细胞定位

Nucleus. Cytoplasm. Nuclear, but also found in the cytoplasm in an inactive form complexed to an inhibitor.

图片



Western blot - HRP Anti-NFkB p105 / p50 antibody [E381] (ab195854)

All lanes : HRP Anti-NFkB p105 / p50 antibody [E381] (ab195854) at 1/2000 dilution

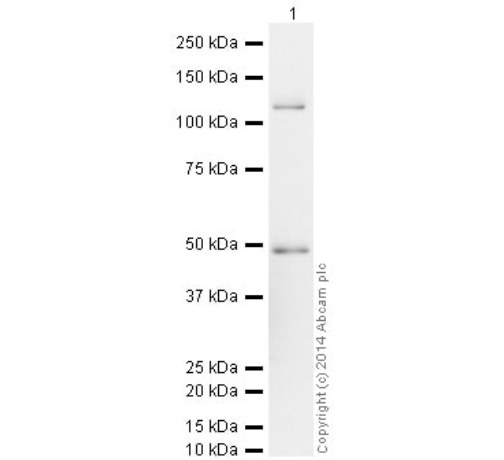
Lane 1 : Wild-type HAP1 whole cell lysate
Lane 2 : Nfkb1 (NFkB p105 / p50) knockout HAP1 whole cell lysate

Lysates/proteins at 20 µg per lane.

Predicted band size: 50 kDa
Observed band size: 105,50 kDa

Exposure time: 20 minutes

ab195854 was shown to recognize NFkB p105 / p50 in wild-type HAP1 cells as signal was lost at the expected MW in Nfkb1 (NFkB p105 / p50) knockout cells. Additional cross-reactive bands were observed in the wild-type and knockout cells. Wild-type and Nfkb1 (NFkB p105 / p50) knockout samples were subjected to SDS-PAGE. Ab195854 and **ab184095** (Mouse monoclonal [mAbcam 9484] to GAPDH - Loading Control (Alexa Fluor® 680) loading control) were incubated overnight at 4°C at 1/2000 dilution and 1/1000 dilution respectively. The loading control was imaged using the Licor Odyssey CLx prior to blots being developed with ECL technique.



Western blot - HRP Anti-NFkB p105 / p50 antibody [E381] (ab195854)

HRP Anti-NFkB p105 / p50 antibody [E381] (ab195854) at 1/2000 dilution + HeLa whole cell lysate (**ab150035**) at 10 µg

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 50 kDa
Observed band size: 105,50 kDa

Exposure time: 20 minutes

This blot was produced using a 4-12% Bis-tris gel under the MOPS buffer system. The gel was run at 200V for 50 minutes before being transferred onto a Nitrocellulose membrane at 30V for 70 minutes. The membrane was then blocked for an hour using 3% milk before being incubated with ab195854 overnight at 4°C. Antibody binding was visualised using ECL development solution **ab133406**.

HRP Anti-NFkB p105 / p50 antibody [E381]

(ab195854)

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