Product Datasheet

AHR Antibody - Azide and BSA Free
NB100-128

Unit Size: 1 ml

Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.

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Reviews: 1 Publications: 19

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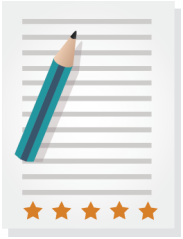
Updated 9/9/2025 v.20.1



NB100-128

AHR Antibody - Azide and BSA Free

Product Information

Unit Size	1 ml
Concentration	This product is unpurified. The exact concentration of antibody is not quantifiable.
Storage	Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	No Preservative
Purity	Unpurified
Buffer	Whole antisera

Product Description

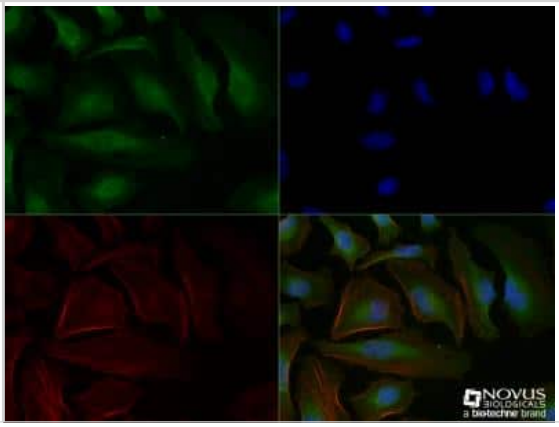
Description	Novus Biologicals Goat AHR Antibody - Azide and BSA Free (NB100-128) is a polyclonal antibody validated for use in IHC, WB, ICC/IF and ChIP. Anti-AHR Antibody: Cited in 16 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Goat
Gene ID	196
Gene Symbol	AHR
Species	Human, Mouse, Rat
Immunogen	N-terminal sequence of Aryl hydrocarbon Receptor purified from C57BL/6J mice. [UniProt# P30561]

Product Application Details

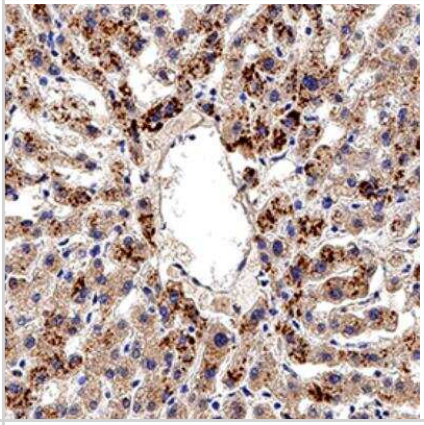
Applications	Western Blot, Immunohistochemistry-Paraffin, Chromatin Immunoprecipitation, Gel Super Shift Assays, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry
Recommended Dilutions	Western Blot reported in scientific literature (PMID 31351871; 24302727; 3999131), Chromatin Immunoprecipitation reported in scientific literature (PMID 3999131), Immunohistochemistry 1:100 - 1:200, Immunocytochemistry/ Immunofluorescence 1:100, Immunohistochemistry-Paraffin 1:100 - 1:200, Gel Super Shift Assays
Application Notes	Suggested working dilution for Gel Super Shift Assay (EMSA) is 4ul of antibody to a 15 ul final volume of EMSA sample. The current lot of this antibody did not work in WB to our QC Team's expectations.

Images

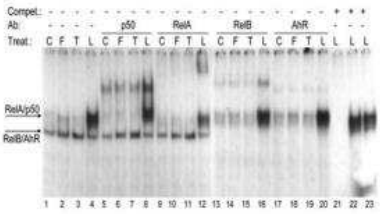
Immunocytochemistry/Immunofluorescence: AHR Antibody [NB100-128] - HeLa cells were fixed for 10 minutes using 10% formalin and then permeabilized for 5 minutes using 1X TBS + 0.5% Triton X-100. The cells were incubated with anti AHR [NB100-128] at a 1:100 dilution overnight at 4C and detected with an anti-goat DyLight 488 (Green) at a 1:500 dilution. Actin was detected with Phalloidin 568 (Red) at a 1:200 dilution. Nuclei were counterstained with DAPI (Blue). Cells were imaged using a 40X objective.



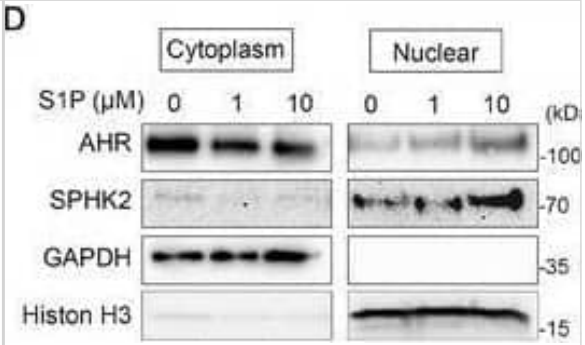
Immunohistochemistry-Paraffin: AHR Antibody [NB100-128] - Analysis of FFPE human liver using 1:200 conc. of AHR antibody on a Bond Rx autostainer (Leica Biosystems). The assay involved 20 minutes of heat induced antigen retrieval (HIER) using 10mM sodium citrate buffer (pH 6.0) and endogenous peroxidase quenching with peroxide block. The sections were incubated with primary antibody for 30 minutes and Bond Polymer Refine Detection (Leica Biosystems) with DAB was used for signal development followed by counterstaining with hematoxylin. Whole slide scanning and capturing of representative images was performed using Aperio AT2 (Leica Biosystems). Staining was performed by Histowiz.

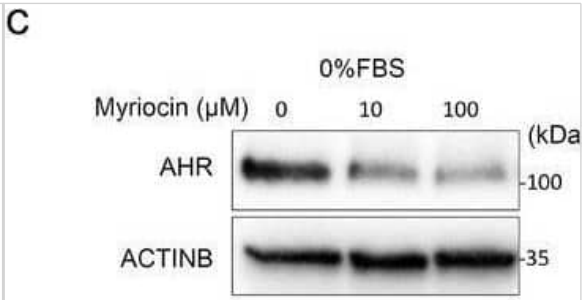
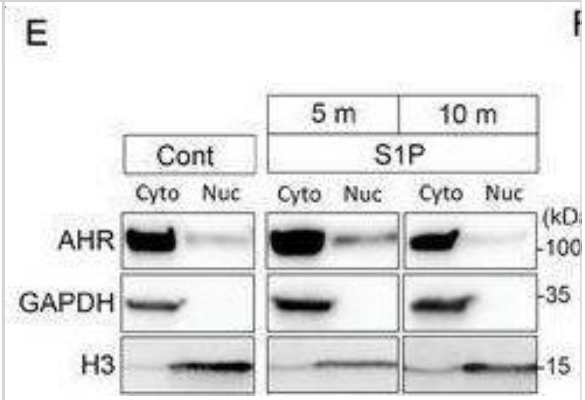


Gel Super Shift Assays: AHR Antibody [NB100-128] - EMSA validation of AHR antibody on U937 cells nuclear protein. Image submitted by verified customer - see review for protocol details.

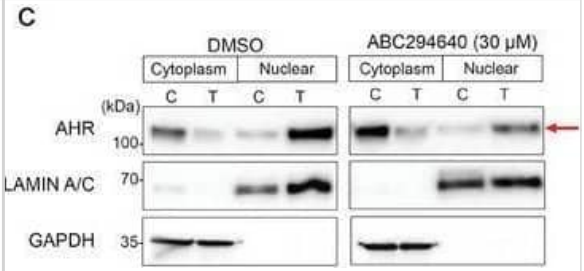


AHR agonist activates the SPHK2/S1P pathway resulting in rapid nuclear retention of the AHR and SPHK2. A) Immunofluorescent images of HeLa cells for p□SPHK2 levels after TCDF (0.1 uM) incubation for 20 min. Arrowheads indicate the peri□nuclear region staining of p□SPHK2 in control cells and arrows indicate the nuclear expression of p□SPHK2 in TCDF treated cells. Hoechst 33342 was used for the counter staining of nuclei. Bar = 20 um. Data are representative images from three independent experiments. B) Western blot analysis of HeLa cells after TCDF treatment for 15 min. C, Control; T, TCDF (n = 3). C) qRT□PCR analysis of HeLa cells for AHR and SPHK2 mRNA levels after S1P incubation for 30 min. C: Control. Data are mean +/- S.D. (n = 3). ****p < 0.0001, *p < 0.05. D) Western blotting analysis of HeLa cells after S1P treatment for 5 min. Cytoplasmic and nuclear extracts were obtained and western blotting analysis conducted with the antibodies indicated (n = 3). E) Western blotting analysis of HeLa cell extracts after 5□ and 10□min treatment with S1P (10 uM). GAPDH and histone H3 (H3) antibodies were used as internal controls for cytoplasmic and nuclear extracts, respectively. All data are representative images of three independent experiments (n = 3). F) Pulldown assays using S1P immobilized on agarose beads or equivalent control beads. After extensive washing, bound proteins were dissolved in SDS sample buffer and separated by SDS□PAGE and subjected to western blotting analysis (n = 3). C, Control; T, TCDF treated, respectively. Images are representative of three independent experiments. Image collected and cropped by CiteAb from the following open publication (https://pubmed.ncbi.nlm.nih.gov/39207053), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Inhibition of serine palmitoyltransferase with myriocin causes decreased AHR expression. A) Western blotting analysis of HeLa cells after myriocin (uM) treatment for 3 h. SPTLC1 and SPTLC2 antibodies were used for the conformation of myriocin effects for the inhibition under this culture condition (10%FBS/DMEM). B) qPCR analysis using AHR and SPTLC1specific primers for 2 or 3 h after myriocin treatment. C) Western blotting analysis of HeLa cell whole lysates after myriocin (uM) treatment under serum free conditions for 1 h. D) CCK8 assay results after overnight culture in 10%FBS/DMEM or 2 h in 0%FBS/DMEM with or without myriocin. All data and images are representative from three independent replicates. ****p < 0.0001, ***p < 0.001, **p < 0.01. Image collected and cropped by CiteAb from the following open publication (https://pubmed.ncbi.nlm.nih.gov/39207053), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	
AHR agonist activates the SPHK2/S1P pathway resulting in rapid nuclear retention of the AHR and SPHK2. A) Immunofluorescent images of HeLa cells for pSPHK2 levels after TCDF (0.1 uM) incubation for 20 min. Arrowheads indicate the perinuclear region staining of pSPHK2 in control cells and arrows indicate the nuclear expression of pSPHK2 in TCDF treated cells. Hoechst 33342 was used for the counter staining of nuclei. Bar = 20 um. Data are representative images from three independent experiments. B) Western blot analysis of HeLa cells after TCDF treatment for 15 min. C, Control; T, TCDF (n = 3). C) qRTPCR analysis of HeLa cells for AHR and SPHK2 mRNA levels after S1P incubation for 30 min. C: Control. Data are mean +/- S.D. (n = 3). ****p < 0.0001, *p < 0.05. D) Western blotting analysis of HeLa cells after S1P treatment for 5 min. Cytoplasmic and nuclear extracts were obtained and western blotting analysis conducted with the antibodies indicated (n = 3). E) Western blotting analysis of HeLa cell extracts after 5 and 10min treatment with S1P (10 uM). GAPDH and histone H3 (H3) antibodies were used as internal controls for cytoplasmic and nuclear extracts, respectively. All data are representative images of three independent experiments (n = 3). F) Pulldown assays using S1P immobilized on agarose beads or equivalent control beads. After extensive washing, bound proteins were dissolved in SDS sample buffer and separated by SDSPAGE and subjected to western blotting analysis (n = 3). C, Control; T, TCDF treated, respectively. Images are representative of three independent experiments. Image collected and cropped by CiteAb from the following open publication (https://pubmed.ncbi.nlm.nih.gov/39207053), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	

Knockdown of SPHK2 downregulates AHR expression. A) qRT□PCR analysis of CYP1A1 expression in HeLa cells after incubation with or without TCDF (0.1 uM) for 2 h or pretreatment with SPHK2 inhibitor (ABC, ABC294640) for 2 h. Carrier solvent DMSO was used as a control. B) CCK8 assay results after 2 h incubation with different doses of ABC294640 (uM). C) HeLa cells after treatment with 0.1 uM TCDF for 30 min or pretreatment with ABC294640 for 2 h followed by 0.1 uM TCDF for 30 min, cells were fractionated into cytoplasmic and nuclear extracts and subjected to western blotting analysis with the indicated antibodies. Red arrow indicates the reduced level of AHR protein in the ABC294640 + TCDF treated nucleus. LAMIN A/C antibody and GAPDH antibody were used for the loading control of nuclear and cytoplasmic extracts, respectively. n = 3 D) HeLa cells were transfected with SPHK2 shRNA for 48 h and the efficiency of each shRNA plasmid knockdown was assessed by qRT□PCR (left) and western blotting (right). n = 3 E) Western blot analysis of HeLa cells transfected with SPHK2 shRNA or shRNA□scramble (scr) for 48 h. Cells were treated 30 min with or without 0.1 uM TCDF, extracted, and proteins detected with the indicated antibodies. n = 3 F) ABC294640 incubation in HeLa cells for 2 h decreased AHR expression as determined by western blotting analysis. n = 3 G) shRNA for SPHK2 for 48 h decreases AHR mRNA in HeLa cells. (H) Transient overexpression of human SPHK2 for 48 h and qRT□PCR was performed. All data mean +/- S.D. (n = 3). ****p < 0.0001, ***p < 0.001, **p < 0.01, *p < 0.05. Image collected and cropped by CiteAb from the following open publication (https://pubmed.ncbi.nlm.nih.gov/39207053), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



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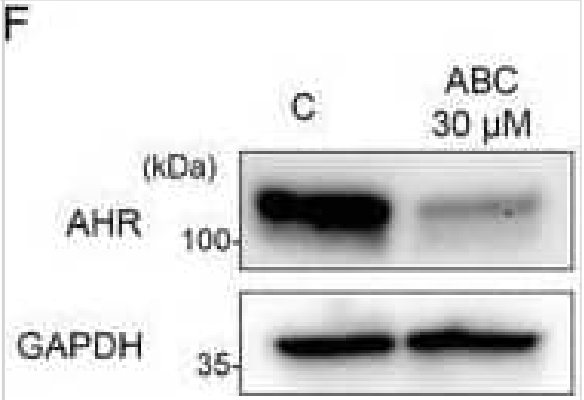

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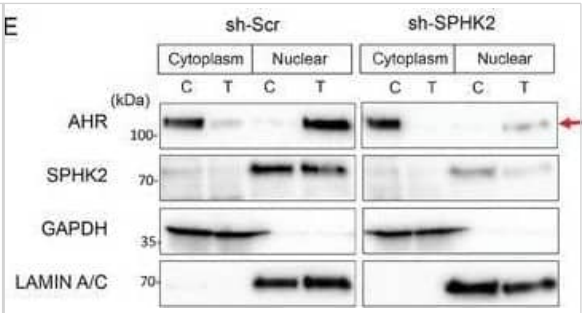
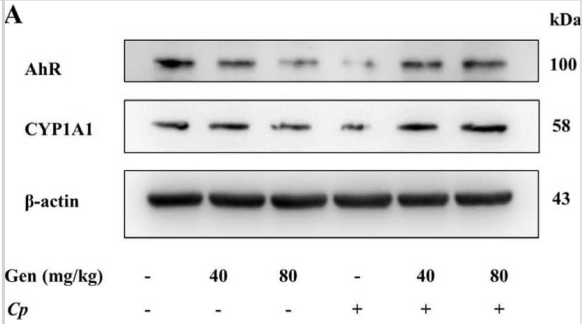
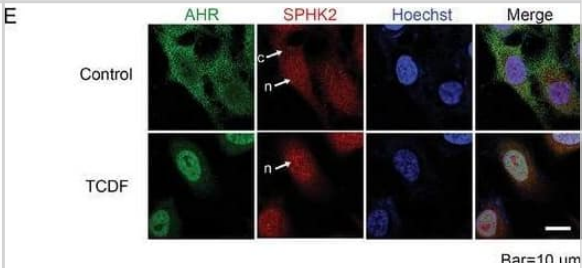
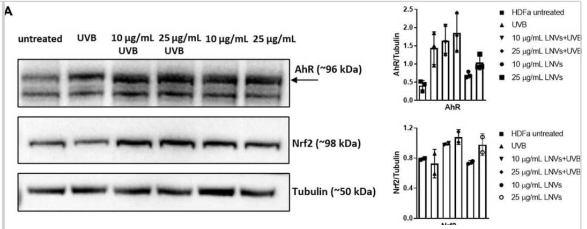
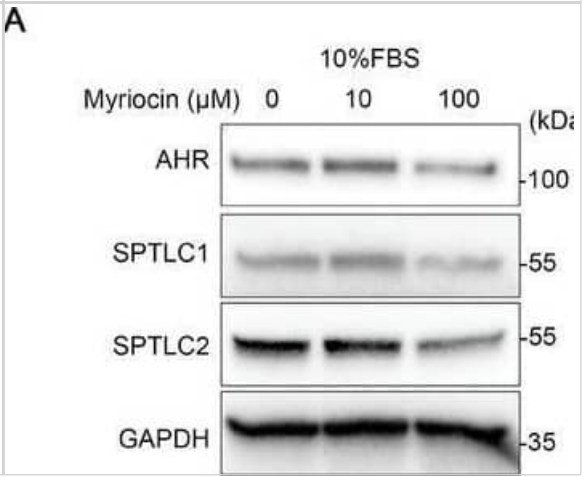


Genistein activates the intestinal AhR pathway in broilers challenged with NE. (A) Western blot of AhR and CYP1A1 in the jejunum of broilers. (B) Quantification of AhR and CYP1A1 protein levels, n = 3. Con, basal diet; Gen40, basal diet supplemented with 40 mg/kg genistein; Gen80, Gen80 diet; Cp, basal diet and Cp infection; Cp+Gen40, Gen40 diet and Cp infection; Cp+Gen80, Gen80 diet and Cp infection. The differences among groups were determined by ANOVA using Duncan's test. The results are presented as mean +/- SEM. Letter a indicates p < 0.05 vs. Con group; letter b indicates p < 0.05 vs. Cp group. Image collected and cropped by CiteAb from the following open publication (https://www.mdpi.com/1422-0067/25/12/6656), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Endogenous AHR and SPHK2 interact in HeLa cells. A,B) HeLa cells treated with or without TCDF were subjected to cytoplasmic/nuclear extract fractionation and immunoprecipitated using AHR antibody and western blotting analysis was performed using an (A) AHR antibody or (B) SPHK2 antibody. C, Control; T, TCDF treated samples. C) After IP of SPHK2, western blotting analysis was performed with AHR, ARNT and SPHK2 antibodies. C, Control; T, TCDF treated samples. D) After IP of ARNT, western blotting analysis was performed with AHR, SPHK2 and ARNT antibodies. C, Control; T, TCDF treated samples. E) Immunofluorescent double staining using anti□AHR and anti□SPHK2 antibodies. The nucleus was counterstained with Hoechst 33 342. Arrows c indicate the cytoplasm, n indicate the nucleus. Bar is 10 um. Data are representative images from three independent experiments. Image collected and cropped by CiteAb from the following open publication (https://pubmed.ncbi.nlm.nih.gov/39207053), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



LNVs activate the AhR/Nrf2 signaling pathway(A) Western blot analysis of AhR (n = 3) and Nrf2 (n = 2) levels in HDFα cell line pre-treated with LNVs (10 and 25 µg/mL) for 24 h and then stimulated with UVB irradiation (20 mJ/cm2) for 25 s. Data are represented as mean +/- SD. (B and C) Confocal analysis of AhR (B, red signal) and Nrf2 (C, green signal) levels in HDFα cell line untreated, or treated with LNVs (10 and 25 µg/mL) for 24h in the presence of UVB; actin was stained with actin green (in green), nuclei with Hoechst (in blue). Scale bar 50 µm. Image collected and cropped by CiteAb from the following open publication (https://pubmed.ncbi.nlm.nih.gov/37426343), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	
Inhibition of serine palmitoyltransferase with myriocin causes decreased AHR expression. A) Western blotting analysis of HeLa cells after myriocin (uM) treatment for 3 h. SPTLC1 and SPTLC2 antibodies were used for the conformation of myriocin effects for the inhibition under this culture condition (10%FBS/DMEM). B) qPCR analysis using AHR□ and SPTLC1□specific primers for 2 or 3 h after myriocin treatment. C) Western blotting analysis of HeLa cell whole lysates after myriocin (uM) treatment under serum free conditions for 1 h. D) CCK8 assay results after overnight culture in 10%FBS/DMEM or 2 h in 0%FBS/DMEM with or without myriocin. All data and images are representative from three independent replicates. ****p < 0.0001, ***p < 0.001, **p < 0.01. Image collected and cropped by CiteAb from the following open publication (https://pubmed.ncbi.nlm.nih.gov/39207053), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	

Publications

Zhao X, Ting S, Sun G et al. Neurological recovery after ICH is mediated by the aryl hydrocarbon receptor-bilirubin interplay through improved erythrophagocytosis Journal of Cerebral Blood Flow & Metabolism 2025-09-17 [PMID: 40963261]

Carrancá Palomo M, Martín Prieto V, Kirilov P. et Al. Colloidal Dispersions of Gelled Lipid Nanoparticles (GLN): Concept and Potential Applications Gels 2017-09-10 [PMID: 30920529]

Gong X, Ye W, Zhou H et al. RanBPM is an acetylcholinesterase-interacting protein that translocates into the nucleus during apoptosis. RanBPM is an acetylcholinesterase-interacting protein that translocates into the nucleus during apoptosis. [PMID: 19902122]

Urzì O, Cafora M, Ganji N et al. Lemon-derived nanovesicles achieve antioxidant and anti-inflammatory effects activating the AhR/Nrf2 signaling pathway iScience 2023-07-01 [PMID: 37426343] (Western Blot, Human)

Du J, Li S, Gu Y et al. Prevotella histicola inhibits neuroinflammation-induced activation of the Toll-like receptor 4 pathway by promoting the release of interleukin 10 from FoxP3+ Treg cells Research Square 2022-06-21 (IF/IHC, ICC/IF, Human)

Pambianchi E, Hagenberg Z, Pecorelli A Et al. Alaskan Bog Blueberry (Vaccinium uliginosum) Extract as an Innovative Topical Approach to Prevent UV-Induced Skin Damage Cosmetics 2021-11-27 (IHC-P, Human)

Jiang J, Zhu J, Liu Q et al. Role of DNA methylation-related chromatin remodeling in aryl hydrocarbon receptor-dependent regulation of T-2 toxin highly inducible Cytochrome P450 1A4 gene FASEB journal : official publication of the Federation of American Societies for Experimental Biology 2021-05-01 [PMID: 33788981]

Liu Q, Wen J, Zhu J et al. Aromatic hydrocarbon receptor regulates chicken cytochrome P450 1A5 transcription: A novel insight into T-2 toxin-induced gene expression and cytotoxicity in LMH cells Biochem. Pharmacol. 2019-07-25 [PMID: 31351871] (WB)

Fukuda I, Nishiumi S, Yabushita Y et al. A new southwestern chemistry-based ELISA for detection of aryl hydrocarbon receptor transformation: application to the screening of its receptor agonists and antagonists. J Immunol Methods 2004-04-01 [PMID: 15099767] (Human)

Vogel CF, Khan EM, Leung PS et al. Cross-talk between Aryl Hydrocarbon Receptor and the inflammatory response: a Role for NF-kB. J Biol Chem. 2013-12-03 [PMID: 24302727] (WB, Human, Mouse)

Vogel CF, Wu D, Goth SR et al. Aryl hydrocarbon receptor signaling regulates NF-kB RelB activation during dendritic-cell differentiation. Immunol Cell Biol. 2013-09-03 [PMID: 23999131] (EMSA, WB, Mouse)

Vogel CF, Li W, Wu D et al. Interaction of aryl hydrocarbon receptor and NF-kappaB subunit RelB in breast cancer is associated with interleukin-8 overexpression. Arch Biochem Biophys 2011-08-01 [PMID: 21640702] (IF/IHC, Human)

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Products Related to NB100-128

NBL1-07403	AHR Overexpression Lysate
NBP2-33376H	Blue Marker Antibody (6F4-F6) [HRP]
HAF017	Rabbit anti-Goat IgG Secondary Antibody [HRP (Horseradish Peroxidase)]
HAF109	Donkey anti-Goat IgG Secondary Antibody [HRP (Horseradish Peroxidase)]

Limitations
This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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