

DESCRIPTION

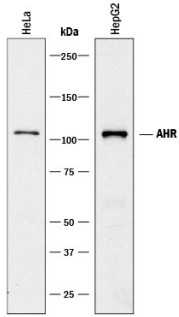
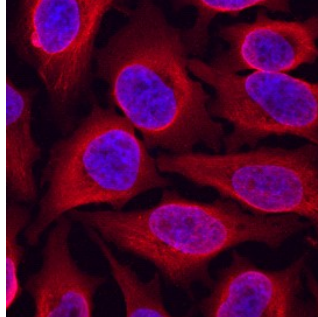
Species Reactivity	Human
Specificity	Detects human AHR in direct ELISAs.
Source	Recombinant Monoclonal Rabbit IgG Clone # 1167A
Purification	Protein A or G purified from cell culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human AHR Asn704-Leu848 Accession # P25869
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Western Blot	0.5 µg/mL	See Below
Immunocytochemistry	1-25 µg/mL	See Below

DATA

<p>Western Blot</p> 	<p>Detection of Human AHR by Western Blot. Western blot shows lysates of HeLa human cervical epithelial carcinoma cell line and HepG2 human hepatocellular carcinoma cell line. PVDF membrane was probed with 0.5 µg/mL of Rabbit Anti-Human AHR Monoclonal Antibody (Catalog # MAB61851) followed by HRP-conjugated Anti-Rabbit IgG Secondary Antibody (Catalog # HAF008). A specific band was detected for AHR at approximately 110 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.</p>	<p>Immunocytochemistry</p>  <p>AHR in HeLa Human Cell Line. AHR was detected in immersion fixed HeLa human cervical epithelial carcinoma cell line using Rabbit Anti-Human AHR Monoclonal Antibody (Catalog # MAB61851) at 1 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Rabbit IgG Secondary Antibody (red; Catalog # NL004) and counterstained with DAPI (blue). Specific staining was localized to nuclei and cytoplasm. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.</p>
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PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

AHR (Aryl-hydrocarbon receptor; also known as bHLHE76) is a 110 kDa member of the bHLH/PAS transcription factor family. It is widely expressed (breast, lung, liver), and serves many functions. First, it binds multiple xenobiotic chemicals in the cytoplasm. This induces dimerization with ARNT, translocation to the nucleus, and activation of P450 genes such as CYP1A1 and UGT1A6. Second, it appears to block cell cycle progression, possibly via a down-regulation of CDK proteins. And third, it blocks apoptosis by interacting with E2F1, thus silencing TP73 and Apaf1 genes. Human AHR is 848 amino acids (aa) in length. It contains a 10 aa prosegment, plus a 838 aa mature molecule that contains a DNA binding motif (aa 13-40), a bHLH region (aa 41-81), and two PAS domains (aa 111-342). Over aa 704-848, human AHR shares 70% aa identity with mouse AHR.