

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human HIF-1 alpha/HIF1A in direct ELISAs.
<b>Source</b>	Recombinant Monoclonal Rabbit IgG <sub>1</sub> Clone # 2443B
<b>Purification</b>	Protein A or G purified from cell culture supernatant
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human HIF-1 alpha/HIF1A Arg575-Asn826 Accession # Q16665.1
<b>Formulation</b>	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.

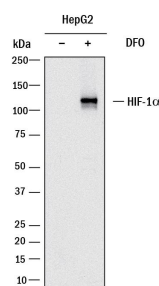
## APPLICATIONS

**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
<b>Western Blot</b>	2 µg/mL	See Below
<b>Immunocytochemistry</b>	3-25 µg/mL	See Below
<b>Simple Western</b>	20 µg/mL	See Below
<b>Knockout Validated</b>	HIF-1 alpha/HIF1A is specifically detected in HeLa human cervical epithelial carcinoma parental cell line but is not detectable in HIF-1 alpha/HIF1A knockout HeLa cell line.	

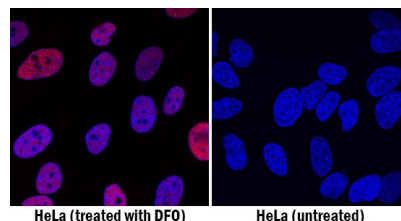
## DATA

### Western Blot



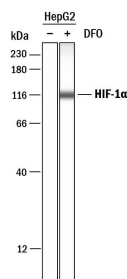
**Detection of Human HIF-1 alpha/HIF1A by Western Blot.** Western blot shows lysates of HepG2 human hepatocellular carcinoma cell line untreated (-) or treated (+) with 1 mM DFO for overnight. PVDF membrane was probed with 2 µg/mL of Rabbit Anti-Human HIF-1 alpha/HIF1A Monoclonal Antibody (Catalog # MAB19351) followed by HRP-conjugated Anti-Rabbit IgG Secondary Antibody (Catalog # HAF008). A specific band was detected for HIF-1 alpha/HIF1A at approximately 120 kDa (as indicated). This experiment was conducted under reducing conditions and using [Immunoblot Buffer Group 1](#).

### Immunocytochemistry



**HIF-1 alpha/HIF1A in HeLa Human Cell Line.** HIF-1 alpha/HIF1A was detected in immersion fixed HeLa human cervical epithelial carcinoma cell line treated with DFO (left panel) or untreated (right panel) using Rabbit Anti-Human HIF-1 alpha/HIF1A Monoclonal Antibody (Catalog # MAB19351) at 3 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. View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#).

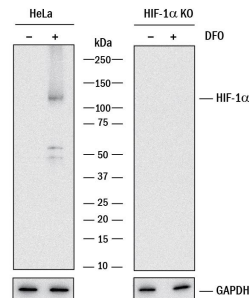
### Simple Western



**Detection of Human HIF-1 alpha/HIF1A by Simple Western™.** Simple Western lane view shows lysates of HepG2 human hepatocellular carcinoma cell line untreated (-) or treated (+) with 1 mM DFO for overnight, loaded at 0.2 mg/mL. A specific band was detected for HIF-1 alpha/HIF1A at approximately 116 kDa (as indicated) using 20 µg/mL of Rabbit Anti-Human HIF-1 alpha/HIF1A Monoclonal Antibody (Catalog # MAB19351). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.



### Knockout Validated



**Western Blot Shows Human HIF-1 alpha/HIF1A Specificity by Using Knockout Cell Line.** Western blot shows lysates of HeLa human cervical epithelial carcinoma parental cell line and HIF-1 alpha/HIF1A knockout HeLa cell line (KO) untreated (-) or treated (+) with 1 mM DFO for overnight. PVDF membrane was probed with 2 µg/mL of Rabbit Anti-Human HIF-1 alpha/HIF1A Monoclonal Antibody (Catalog # MAB19351) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for HIF-1 alpha/HIF1A at approximately 120 kDa (as indicated) in the parental HeLa cell line, but is not detectable in knockout HeLa cell line. GAPDH (Catalog # MAB5718) is shown as a loading control. This experiment was conducted under reducing conditions and using [Immunoblot Buffer Group 1](#).

## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.5 mg/mL in sterile PBS.
<b>Shipping</b>	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
<b>Stability &amp; Storage</b>	<p><b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b></p> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## BACKGROUND

The hypoxia-inducible transcription factor 1α (HIF-1α) is the regulated member of the transcription factor heterodimer HIF-1. HIF-1 binds to hypoxia-response elements (HREs) in the promoters of many genes involved in adapting to an environment of insufficient oxygen or hypoxia. Hypoxic tissue environments occur in vascular and pulmonary diseases as well as cancer, which illustrates the broad impact of gene regulation by HIF-1α.