

## DESCRIPTION

<b>Species Reactivity</b>	Human/Mouse/Rat
<b>Specificity</b>	Detects human HHEX in direct ELISAs and Western blots.
<b>Source</b>	Recombinant Monoclonal Rabbit IgG Clone # 2018B
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human HHEX Thr111-Gly270 Accession # Q03014
<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.

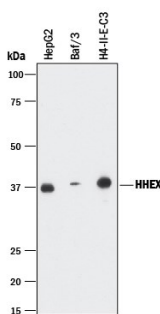
## APPLICATIONS

**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.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	1 µg/mL	See Below
<b>Flow Cytometry</b>	0.25 µg/10 <sup>6</sup> cells	See Below
<b>Immunocytochemistry</b>	2-25 µg/mL	See Below

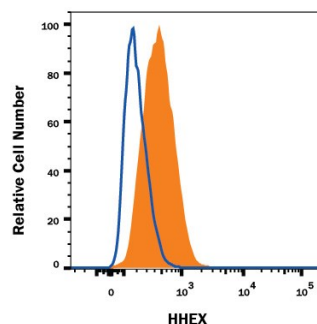
## DATA

### Western Blot



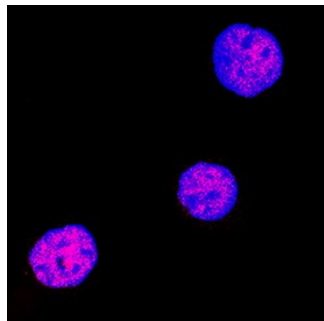
**Detection of Human, Mouse, and Rat HHEX by Western Blot.** Western blot shows lysates of HepG2 human hepatocellular carcinoma cell line, BaF3 mouse pro-B cell line, and H4-II-E-C3 rat hepatoma cell line. PVDF membrane was probed with 1 µg/mL of Rabbit Anti-Human/Mouse/Rat HHEX Monoclonal Antibody (Catalog # MAB83771) followed by HRP-conjugated Anti-Rabbit IgG Secondary Antibody (Catalog # HAF008). A specific band was detected for HHEX at approximately 37 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

### Flow Cytometry



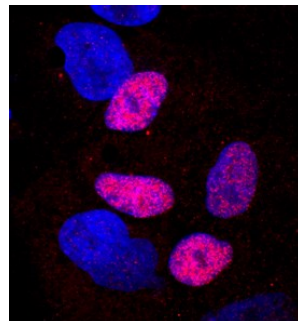
**Detection of HHEX in A549 Human Cell Line by Flow Cytometry.** A549 human lung carcinoma cell line was stained with Rabbit Anti-Human/Mouse/Rat HHEX Monoclonal Antibody (Catalog # MAB83771, filled histogram) or isotype control antibody (Catalog # AB-105-C, open histogram), followed by Phycoerythrin-conjugated Anti-Rabbit IgG Secondary Antibody (Catalog # F0110). To facilitate intracellular staining, cells were fixed and permeabilized with FlowX FoxP3 Fixation & Permeabilization Buffer Kit (Catalog # FC012). View our protocol for [Staining Intracellular Molecules](#).

### Immunocytochemistry



**HHEX in K562 Human Cell Line.** HHEX was detected in immersion fixed K562 human chronic myelogenous leukemia cell line using Rabbit Anti-Human/Mouse/Rat HHEX Polyclonal Antibody (Catalog # MAB83771) 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 Non-adherent Cells](#).

### Immunocytochemistry



**HHEX in iBJ6 iPS Cell Line.** HHEX was detected in immersion fixed iBJ6 iPS cell line differentiated into hepatocytes using Rabbit Anti-Human/Mouse/Rat HHEX Polyclonal Antibody (Catalog # MAB83771) at 2 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](#).

## 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>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <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**

Hematopoietically-expressed homeobox protein (HHEX), also known as HEX, PRH and PRHX, is a 35-40 kDa member of the Homeobox family of transcription factors. Family members are distinguished by an evolutionarily conserved DNA-binding homeodomain of 60 amino acids (aa), which for HHEX spans aa 137-196. Human HHEX was initially isolated from hematopoietic tissue, and is present in several hematopoietic progenitors, where its expression is down-regulated during terminal cell differentiation. HHEX is also expressed in the anterior visceral endoderm during early mouse development, and in some adult tissues of endodermal origin, including liver, lung and thyroid. HHEX knockout in mice is embryonic lethal, with impaired forebrain, liver and thyroid development. Human HHEX is 270 aa in length, and over aa 111-270, shares 93% and 95% identity with mouse and rat HHEX, respectively.