

DESCRIPTION

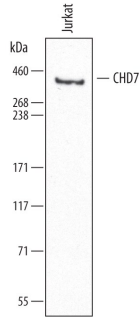
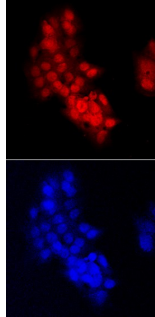
Species Reactivity	Human
Specificity	Detects human CHD7 in direct ELISAs and Western blots.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human CHD7 A1a263-Gln457 Accession # Q9P2D1
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied 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	5-15 µg/mL	See Below

DATA

<p>Western Blot</p>  <p>Detection of Human CHD7 by Western Blot. Western blot shows lysates of Jurkat human acute T cell leukemia cell line. PVDF membrane was probed with 0.5 µg/mL of Sheep Anti-Human CHD7 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7350) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for CHD7 at approximately 350 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 8.</p>	<p>Immunocytochemistry</p>  <p>CHD7 in HepG2 Human Cell Line. CHD7 was detected in immersion fixed HepG2 human hepatocellular carcinoma cell line using Sheep Anti-Human CHD7 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7350) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Sheep IgG Secondary Antibody (red, upper panel; Catalog # NL010) and counterstained with DAPI (blue, lower panel). Specific staining was localized to nuclei. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.</p>
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PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.2 mg/mL.
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

CHD7 (Chromohelicase/ATPase DNA-binding protein 7) is a 350 kDa member of the third subgroup in the SNF2/RAD54 helicase family of proteins. It is an ATP-dependent chromatin remodeling factor that also binds histones (H3 at Lys4) and influences transcription. CHD7 binds more than 10,000 sites on chromatin, particularly in locations associated with gene enhancement. Notably, CHD7 is most associated with the nervous system, and is found in embryonic hypothalamus (GnRH neurons), olfactory epithelium and spinal cord, and adult preoptic hypothalamus plus hippocampus. Human CHD7 is 2997 amino acids (aa) in length. It contains consecutive Gln-, Pro- and Lys-rich regions (aa 151-718), two Chromo (chromatin-organizer-modifier) domains (aa 800-947), a helicase ATP-binding domain (aa 980-1154), a C-terminal helicase domain (aa 1294-1464), one coiled-coil region (aa 2410-2431) and two BRK domains (aa 2562-2604 and 2642-2686). There are at least seven utilized Ser/Thr phosphorylation sites, and three potential isoform variants. One isoform contains a 12 aa substitution for aa 1127-2997, a second 145 kDa isoform shows a deletion of aa 573-2621, while a third isoform contains a 15 aa insertion after Ser698. CHD7 is reported to bind to subgroup three member CHD8. Over aa 263-457, human CHD7 shares 96% aa identity with mouse CHD7.