

DESCRIPTION

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|---------------------------|---|
| Species Reactivity | Human |
| Specificity | Detects human CHD7 in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human CEBP epsilon is observed. |
| Source | Monoclonal Mouse IgG ₁ Clone # 772503 |
| Purification | Protein A or G purified from hybridoma culture supernatant |
| Immunogen | <i>E. coli</i> -derived recombinant human CHD7 Ala263-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 either lyophilized or as a 0.2 µm filtered solution in PBS. |

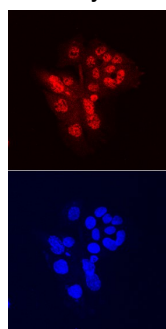
APPLICATIONS

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 |
|----------------------------|----------------------------------|---------------|
| Immunocytochemistry | 8-25 µg/mL | See Below |

DATA

Immunocytochemistry



CHD7 in HepG2 Human Cell Line. CHD7 was detected in immersion fixed HepG2 human hepatocellular carcinoma cell line using Mouse Anti-Human CHD7 Monoclonal Antibody (Catalog # MAB7350) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red, upper panel; Catalog # NL007) and counterstained with DAPI (blue, lower panel). Specific staining was localized to nuclei. View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#).

PREPARATION AND STORAGE

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|--------------------------------|--|
| Reconstitution | Sterile PBS to a final concentration of 0.5 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 sequence identity with mouse CHD7.