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Product Information

Anti-HOXD4 (N-terminal)
produced in rabbit, affinity isolated antibody

Product Number **H3291**

Product Description

Anti-HOXD4 (N-terminal) is produced in rabbit using as the immunogen a synthetic peptide corresponding to a sequence at the N-terminal of human HOXD4 (GeneID: 3233) conjugated to KLH. The corresponding sequence differs by one amino acid in mouse and rat. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-HOXD4 (N-terminal) recognizes human and mouse- HOXD4 (also known as HOX-4B, HOX-5.1, HHO.C13). The antibody may be used in several immunochemical techniques including immunoblotting (~35 kDa), immunoprecipitation, and immuno-fluorescence. Detection of the HOXD4 band by immunoblotting is specifically inhibited with the immunizing peptide.

Hox genes are evolutionarily conserved transcription factors, which act to control important development pathways involved in morphogenesis of the embryo. In vertebrates, there are 39 *HOX* genes that are organized into four clusters (*HOXA*–*HOXD*), located on different chromosomes (7p15, 17q21.2, 12q13, and 2q31.). Each cluster contains 9–11 member genes encoding relatively small gene products containing a highly conserved 60-amino-acid region (the homeobox), with DNA-binding activity that contributes to their activity as transcription factors.[1] One of the major functions of *Hox* genes seems to be the formation of the body plan during embryonic development.[2] In addition to roles in normal development, altered homeobox gene function or expression is implicated in the development of cancers, such as leukemias or neoplasms of the breast, prostate, kidney, colon, skin, and brain.[3,4]

HOXD4 is expressed in mesodermal tissues and in the central nervous system (CNS).[5]

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody concentration: ~1.0 mg/mL

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2–8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working antibody concentration of 0.5-1 μg/mL is recommended using mouse brain extract.

Immunoprecipitation: a working antibody amount of 1.5-3 μg is recommended using lysates of HEK-293T cells overexpressing human HOXD4.

Immunofluorescence: a working antibody concentration of 0.25-0.5 μg/mL is recommended using paraformaldehyde-fixed HEK-293T cells over-expressing human HOXD4.

Note: In order to obtain best results in various techniques and preparations, it is recommended to determine optimal working dilutions by titration.

References

1. Lemons, D., and McGinnis, W., *Science*, **313**, 1918–1922 (2006).
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3. Stuart, E.T. et al., *Adv. Genet.,* **33**, 255–274 (1995).
4. Cillo, C. et al., *Exp. Cell Res.,* **248**, 1–9 (1999).
5. Rastegar, M. et al., *Mol. Cell. Biol.*, **24**, 8090-8103 (2004).

VS,SG,TD,KAA,PHC,MAM 04/19-1