

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human Netrin-4 in direct ELISAs and Western blots. In direct ELISAs and Western blots, approximately 50% cross-reactivity with recombinant mouse Netrin-4 is observed, 15% cross-reactivity with recombinant chicken (rch) Netrin-1 is observed and less than 5% cross-reactivity with recombinant mouse (rm) Netrin-G1a, Netrin-G2a, and rchNetrin-2 is observed.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human Netrin-4 Val26-Lys628 Accession # Q9HB63
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

## 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>	0.1 µg/mL	Recombinant Human Netrin-4 (Catalog # <a href="#">1254-N4</a> )
<b>Immunohistochemistry</b>	5-15 µg/mL	Immersion fixed paraffin-embedded sections of human kidney

## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.2 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.
<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>

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U.S. Patent # 5,824,775, 6,218,526, and other U.S. and international patents pending.

## BACKGROUND

Netrins/UNC-6 (netr: Sanskrit for "one who guides") are a family of laminin-related small proteins that are involved in neurite outgrowth and axon guidance. Netrins bind to the DCC and UNC5 family of receptors to attract or repel axons. Human Netrin-4 is synthesized as a 628 amino acid (aa) precursor that contains a 19 aa signal sequence, a 443 aa laminin-related region containing an N-terminal laminin globular domain (domain VI) followed by 3 laminin EGF-like repeats, and a 166 aa C-terminal domain rich in basic aa residues that serves as a heparin binding site. Unlike human Netrin-1 which is reminiscent of the laminin γ-chain, human Netrin-4 resembles the laminin β-chain. Netrin-4 has been reported to exist as both a monomer and a dimer. The dimeric form was reported to be the less active of the two. Human Netrin-4 shares 31%, 29% and 25% aa sequence identity with human Netrin-1, 2 and G2, respectively; it shares 89% aa identity with mouse Netrin-4. Netrin-4 has widespread expression, occurring in nervous tissues such as embryonic floor plate and postnatal neurons such as cerebellar granule cells and hippocampal pyramidal cells. It also is found in non-neural tissues, such as adult Bowman's capsule and medullary tubular epithelium in kidney, and embryonic pancreatic and intestinal epithelium, plus cells of the ureteric bud. Netrin-4 expression is often associated with basement membrane. Netrin-4 has been shown to initiate axon outgrowth from olfactory bulb explants (1-7).

## References:

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