

DESCRIPTION

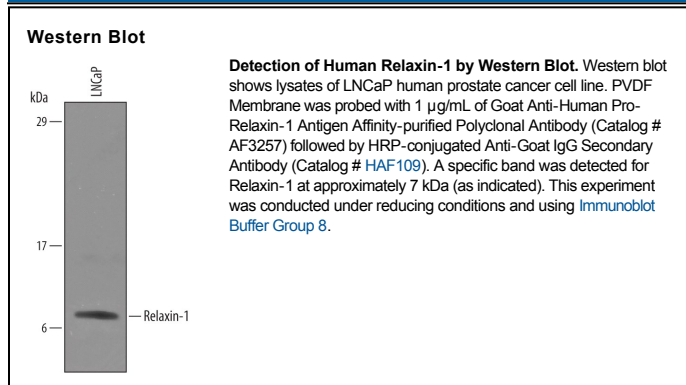
Species Reactivity	Human
Specificity	Detects human Relaxin-1 in direct ELISAs and Western blots. In direct ELISAs, less than 5% cross-reactivity with recombinant human (rh) Relaxin-2 and rhRelaxin-3 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human Relaxin-1 Lys26-Cys185 Accession # P04808
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	1 µg/mL	See Below

DATA



PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
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

Human Relaxin-1, also called H1 Relaxin or RLN1, is one of three human relaxins in the structurally related insulin/relaxin superfamily (1, 2). Relaxin-1 is thought to be the result of duplication of the Relaxin-2 gene in higher primates only. In species below higher primates, Relaxin-1 is the equivalent of human Relaxin-2. Relaxin-1 is found in some but not all tissues expressing Relaxin-2. It is prominent in the prostate, but also present in decidua, placenta, endometrium and at low levels in the myocardium (2, 3). As with other insulin/relaxin superfamily members, human Relaxin-1 is synthesized as a prohormone (4). Processing of the 21 kDa preprorelaxin-1 includes removal of the signal sequence, formation of two disulfide bonds between A and B chains and removal of the intervening C-chain by a prohormone convertase. The resulting mature protein is an unglycosylated, 6 kDa dimer of disulfide-linked A and B chains. Human Relaxin-1 shares 76% amino acid (aa) identity with human Relaxin-2, and 43%, 50%, and 43% aa identity with mouse, rat, and canine Relaxin-1, respectively. An alternate splice form of unknown significance has a 47 aa substitution which does not have typical C-chain cleavage motifs (5). Relaxins confer activity by binding to leucine-rich G-protein coupled receptors LGR7 and LGR8 (2, 6). Prostatic relaxins are anti-apoptotic and contribute to development and maintenance of male fertility. It is not clear whether human Relaxins -1 and -2 have distinct functions. Both use the same receptor and have the same critical amino acids for folding and for receptor interaction. While receptor affinity is similar, activity is lower for Relaxin-1 as compared to Relaxin-2 (7). Progesterone increases expression of only Relaxin-2, while glucocorticoids increase expression of both (8).

References:

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2. Sherwood, O.D. (2004) *Endocr. Rev.* **25**:205.
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4. Hudson, P. *et al.* (1984) *EMBO J.* **3**:2333.
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8. Garibay-Tupas, J.L. *et al.* (2004) *Mol. Cell. Endocrinol.* **219**:115.