

## DESCRIPTION

|                           |                                                                                                                                                                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Human                                                                                                                                                                                                                                                                       |
| <b>Specificity</b>        | Detects human Pro Relaxin-3 in direct ELISAs and Western blots. No cross-reactivity with mature human Relaxin-3, human Pro Relaxin-1 or human Pro Relaxin-2 is observed.                                                                                                    |
| <b>Source</b>             | Monoclonal Mouse IgG <sub>2A</sub> Clone # 332112                                                                                                                                                                                                                           |
| <b>Purification</b>       | Protein A or G purified from hybridoma culture supernatant                                                                                                                                                                                                                  |
| <b>Immunogen</b>          | <i>E. coli</i> -derived recombinant human Relaxin-3<br>Arg26-Cys142<br>Accession # Q8WXF3                                                                                                                                                                                   |
| <b>Conjugate</b>          | Alexa Fluor 750<br>Excitation Wavelength: 749 nm<br>Emission Wavelength: 775 nm                                                                                                                                                                                             |
| <b>Formulation</b>        | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide<br><br>*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions. |

## 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.

**Western Blot** Optimal dilution of this antibody should be experimentally determined.

## PREPARATION AND STORAGE

**Shipping** The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

**Stability & Storage** Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

## BACKGROUND

Human Relaxin-3 (H3 relaxin, INSL7) is one of seven relaxin-like peptides belonging to the insulin superfamily (1-4). Unlike human relaxins 1 and 2, it does not play a role in reproduction but appears to be a neuropeptide involved in stress response in the brain stem (3-5). The single-chain human Prorelaxin-3 shares 83% and 80% amino acid (aa) sequence identity with mouse and rat prorelaxin-3, respectively. The 142 aa Relaxin-3 pre-proprotein is processed to remove a 25 aa signal peptide and a connecting peptide (aa 53-118). The resulting mature Relaxin-3 is a 5.5 kDa, 51 aa secreted heterodimer of A (aa 119-142) and B (aa 26-52) peptides connected by two intermolecular disulfide bonds (1). Mature human Relaxin-3 is 96%, 94%, and 92% aa identical to porcine, canine, and mouse Relaxin-3, respectively. This is much higher identity between species than that seen for other relaxins. Relaxin-3 is thus suggested to be the ancestral relaxin family member (2). Relaxin-3 is the only known ligand for the G-protein-coupled receptor GPCR135, designated RXFP3 (4, 6). In rodents, GPCR135 is expressed primarily in the supraoptic and paraventricular nucleus (6). This region has connections to the dorsal tegmental region of the pons (also called the nucleus incertus), where expression of Relaxin-3 is highest (5). Relaxin-3 also binds the more widely-expressed LGR7 (RXFP1) receptor, but with lower affinity than that of Relaxin-2 (1, 7). Although binding of Relaxin-3 to LGR7 increases intracellular cAMP, binding to GPCR135 inhibits cAMP accumulation, indicating coupling to G<sub>i</sub>, G<sub>o</sub> or G<sub>z</sub> by this receptor (1, 5). Relaxin-3 expression does not overlap well with its other receptor, GPCR142, which instead appears to be the primary receptor for INSL5 (3, 8).

## PRODUCT SPECIFIC NOTICES

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