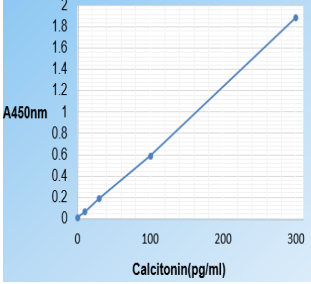


## Human Calcitonin ELISA Kit, ultrasensitive, # 0390-CTU, 96 tests

Human calcitonin is a sandwich ELISA for the determination of human Calcitonin (CT) in serum, plasma or other biological samples. For research use only (RUO), not for use in diagnostic procedures.

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|--|---|
|  <p style="font-size: small; text-align: center;">9 ADI_SV_0390-CTU</p> | <h3 style="text-align: center;">Human Calcitonin ELISA Kit Features</h3> <p><b>Standards Range 0-300 pg/ml</b><br/> <b>Sensitivity:</b> 1 pg/mL<br/> <b>Assay time:</b> 5-hour incubation (22-28°C)<br/> <b>Samples:</b> Serum (100 ul)</p> <p>This kit is for measuring Human Calcitonin in Serum<br/>         For in vitro research use only (RUO).</p> |
|--|---|

**Assay Procedure: Allow all reagents to reach room temperature. Arrange required number of strips on the plate.**

- Step 1. Add 100 µl of pre-diluted standards, controls and samples (diluted) into respective wells.
- Step 2. Pipette 50 µl of Biotinylated antibody.
- Step 3. Dispense 50 µl of HRP conjugate into all the wells. Incubate for 4 ± 30 mins at 22-28°C on an orbital shaker or rotator set at 170 + 10 rpm.
- Step 4. Aspirate and wash wells 5 times with 350 µl wash buffer. Remove excess wash by gently tapping plate on paper towel.
- Step 5. Dispense 150 µl of the TMB Substrate into each of the wells. Incubate the microtiter plate for 30 minutes at 22-28°C on an orbital shaker at 170 + 10 rpm.
- Step 6. Add 100 µl of Stop Solution into each well. Add stop solution to wells in the same order as substrate upon which color will change from blue to yellow. Mix thoroughly by gently shaking the plate. Measure yellow color at 450 nm. Standard range is plotted and the sample values are calculated from the standard curve.

### Kit Specifications

|                                 |   |                    |                            |
|---------------------------------|---|--------------------|----------------------------|
| <b>Intra-assay</b>              | 2.8-5.7% CV (24-403 pg/ml)                        | <b>Inter-assay</b> | 6.1-7.4% CV (16-340 pg/ml) |
| <b>Recovery</b>                 | 90-110%   | <b>Linearity</b>   | (1:2-1:8) 94-101%          |
| <b>Species Cross reactivity</b> | PTH (1-84), CGRP, salmon calcitonin, TSH (<0.1%). |                    |                            |

### General Information

Calcitonin (CT) is a 32 amino acid peptide hormone secreted by the para-follicular C-cells of the thyroid gland under serum calcium control. After acute administration, this peptide acts as a potent hypocalcemic and hypophosphatemic hormone by increasing renal calcium clearance and reducing bone resorption. However, its precise physiological role in bone metabolism is not yet fully understood. Various forms of CT may be detected in blood samples, including a CT monomer, an oxidized monomer, a dimer, higher molecular weight forms, and possibly precursor of CT. The concentrations of these peptides are influenced by, renal function and tissular origin of CT (normal or ectopic production).

|           |   |
|-----------|---|
| Human CT  | Cys-Gly-Asn-Leu-Ser-Thr-Cys-Met-Leu-Gly-Thr-Tyr-Thr-Gln-Asp-Phe-Asn-Lys-Phe-His-Thr-Phe-Pro-Gln-Thr-Ala-Ile-Gly-Val-Gly-Ala-Pro |
| Salmon CT | Cys-Ser-Asn-Leu-Ser-Thr-Cys-Val-Leu-Gly-Lys-Leu-Ser-Gln-Glu-Leu-His-Lys-Leu-Gln-Thr-Tyr-Pro-Arg-Thr-Asn-Thr-Gly-Ser-Gly-Thr-Pro |

Medullar thyroid carcinoma (MTC) is a malignant tumor, developed from the C-cells, secreting calcitonin in large excess. This disease occurs either as a sporadic (80%) or a familial (20%) form, which is transmitted as an autosomal dominant gene or as a component of multiple endocrine neoplasia (IIb). Moderate hypercalcitoninemia is also observed in pregnancy, pernicious anaemia, renal failure and during the neonatal period. Preferably, monomer form of CT is detected in this assay.

### Related Items

| Catalog#   | Prod Description  |
|------------|---|
| CT12-M     | monoclonal anti-Human Calcitonin (CT) IgG                                     |
| CGRP11-A   | Anti-Human Calcitonin Gene Related Peptide (CGRP) IgG #1, aff pure            |
| CGRP11-P   | Anti-Human Calcitonin Gene Related Peptide (CGRP) Control/blocking peptide #1 |
| CGRP12-A   | Anti-Human Calcitonin Gene Related Peptide (CGRP) IgG #2, aff pure            |
| CGRP12-P   | Human Calcitonin Gene Related Peptide (CGRP) Control/blocking peptide #2      |
| CT11-A     | Goat Anti-Human Calcitonin (CT) antibody, IgG aff. pure                       |
| CGRP15-P-5 | Human Calcitonin Gene Related Peptide (CGRP, 1-37) peptide                    |
| CGRP16-P-5 | Rat Calcitonin Gene Related Peptide (CGRP, 1-37) peptide                      |
| CRLR11-A   | Anti-Rat Calcitonin Receptor Like receptor (CRLR) IgG aff pure                |
| CRLR11-P   | Rat Calcitonin Receptor Like receptor (CRLR) Control/blocking peptide         |
| CT11-P     | Human Calcitonin (CT) Control/blocking peptide                                |
| RP-1491    | Salmon Calcitonin Acetate   |
| CT13-M     | Monoclonal anti-Human Calcitonin (CT) IgG #2                                  |

0390-CTU-Human-Calcitonin-ELISA-kit

151222SV

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