



# Human protein disulfide isomerase,PDI ELISA Kit

|                      |                                                                                                                                                                                                        |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Code         | CSB-E09003h                                                                                                                                                                                            |
| Abbreviation         | P4HB                                                                                                                                                                                                   |
| Target Name          | prolyl 4-hydroxylase, beta polypeptide                                                                                                                                                                 |
| Uniprot No.          | P07237                                                                                                                                                                                                 |
| Alias                | DSI, ERBA2L, GIT, P4Hbeta, PDI, PDIA1, PHDB, PO4DB, PO4HB, PROHB, collagen prolyl 4-hydroxylase beta[glutathione-insulin transhydrogenase]procollagen-proline, 2-oxoglutarate 4-dioxygenase (proline 4 |
| Product Type         | ELISA Kit                                                                                                                                                                                              |
| Immunogen Species    | Homo sapiens (Human)                                                                                                                                                                                   |
| Sample Types         | serum, plasma, tissue homogenates                                                                                                                                                                      |
| Detection Range      | 0.312 ng/mL-20 ng/mL                                                                                                                                                                                   |
| Sensitivity          | 0.078 ng/mL                                                                                                                                                                                            |
| Assay Time           | 1-5h                                                                                                                                                                                                   |
| Sample Volume        | 50-100ul                                                                                                                                                                                               |
| Detection Wavelength | 450 nm                                                                                                                                                                                                 |
| Lead Time            | 3-5 working days after you place the order, and it takes another 3-5 days for delivery via DHL or FedEx.                                                                                               |
| Research Area        | Cancer                                                                                                                                                                                                 |
| Gene Names           | P4HB                                                                                                                                                                                                   |
| Tag Info             | quantitative                                                                                                                                                                                           |
| Protein Description  | Sandwich                                                                                                                                                                                               |

## Description

The Human Protein Disulfide Isomerase (PDI) ELISA Kit is an essential tool for quantitative detection of PDI in human serum, plasma, and tissue homogenates. This ELISA kit is specifically designed for research in the field of cancer and cardiovascular, allowing researchers to accurately measure PDI levels with a high level of sensitivity and a wide detection range.

The PDI protein, also known as protein disulfide-isomerase, plays a crucial role in protein folding and disulfide bond formation, making it a key player in various cellular processes. Our PDI ELISA kit is based on a sandwich assay principle, providing reliable and reproducible results with minimal interference from other proteins.

With a sensitivity of 0.078 ng/mL and a detection range of 0.312 ng/mL-20 ng/mL, this ELISA kit can accurately measure PDI levels in a variety of samples. The assay time ranges from 1-5 hours, and the sample volume required is 50-100ul. The detection wavelength is 450 nm, ensuring accurate and precise



measurement of PDI levels.

This ELISA kit is an excellent choice for researchers studying cancer and cardiovascular. By providing accurate and sensitive measurements of PDI levels, our ELISA kit can help researchers gain a deeper understanding of the role of PDI in cancer and potentially identify new therapeutic targets.

### Target Details

This gene encodes the beta subunit of prolyl 4-hydroxylase, a highly abundant multifunctional enzyme that belongs to the protein disulfide isomerase family. When present as a tetramer consisting of two alpha and two beta subunits, this enzyme is involved in hydroxylation of prolyl residues in procollagen. This enzyme is also a disulfide isomerase containing two thioredoxin domains that catalyze the formation, breakage and rearrangement of disulfide bonds. Other known functions include its ability to act as a chaperone that inhibits aggregation of misfolded proteins in a concentration-dependent manner, its ability to bind thyroid hormone, its role in both the influx and efflux of S-nitrosothiol-bound nitric oxide, and its function as a subunit of the microsomal triglyceride transfer protein complex.

### Product Precision

Intra-assay Precision (Precision within an assay): CV%<8%  
Three samples of known concentration were tested twenty times on one plate to assess.

Inter-assay Precision (Precision between assays): CV%<10%  
Three samples of known concentration were tested in twenty assays to assess.

### Linearity

To assess the linearity of the assay, samples were spiked with high concentrations of human PDI in various matrices and diluted with the Sample Diluent to produce samples with values within the dynamic range of the assay.

|      | Sample    | Serum(n=4) |
|------|-----------|------------|
| 1:5  | Average % | 95         |
|      | Range %   | 89-99      |
| 1:10 | Average % | 98         |
|      | Range %   | 93-103     |
| 1:20 | Average % | 92         |
|      | Range %   | 88-96      |
| 1:40 | Average % | 95         |
|      | Range %   | 87-99      |

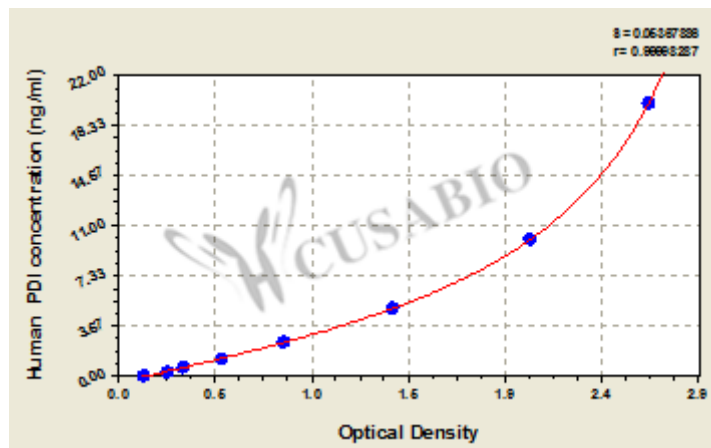
### Recovery

The recovery of human PDI spiked to levels throughout the range of the assay in various matrices was evaluated. Samples were diluted prior to assay as directed in the Sample Preparation section.

| Sample Type       | Average % Recovery | Range  |
|-------------------|--------------------|--------|
| Serum (n=5)       | 97                 | 94-101 |
| EDTA plasma (n=4) | 88                 | 82-92  |

### Typical

These standard curves are provided for demonstration only. A standard curve should be generated for each set of samples assayed.



| ng/ml | OD1   | OD2   | Average | Corrected |
|-------|-------|-------|---------|-----------|
| 20    | 2.724 | 2.587 | 2.656   | 2.518     |
| 10    | 2.125 | 2.008 | 2.067   | 1.929     |
| 5     | 1.368 | 1.397 | 1.383   | 1.245     |
| 2.5   | 0.842 | 0.831 | 0.837   | 0.699     |
| 1.25  | 0.526 | 0.538 | 0.532   | 0.394     |
| 0.625 | 0.345 | 0.334 | 0.340   | 0.202     |
| 0.312 | 0.262 | 0.254 | 0.258   | 0.120     |
| 0     | 0.139 | 0.137 | 0.138   |           |

## Msds

```
{
  "0": {
    "fileurl": "https://www.cusabio.com/uploadfile/msds/MSDS CSB-E09003h.pdf",
    "filename": "MSDS"
  }
}
```