

## INSULIN (human) ELISA KIT #A05322

### KEY INFORMATION

- Broadest Standard Curve Range
- High sensitivity
- Versatile assay for all your samples



### GENERAL INFORMATION

Insulin is a polypeptide composed of 51 amino acids divided into two chains (A and B) linked by disulfide bonds. Both chains are organized as alpha helix.

Insulin is produced by the beta cells of the pancreatic islets in form of a precursor (prepro-insulin) and is modified to obtain the pro-insulin (peptide signal elimination) and finally insulin (peptide C elimination).

The main function of the insulin is the regulation of the glucose concentration in the organism. The dysregulation of the production of insulin induced many disorders including diabetes.

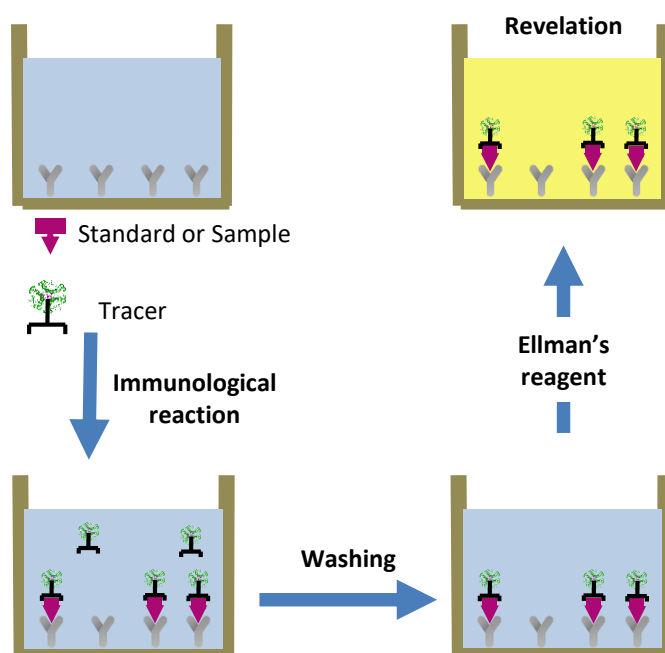
### FOCUS ON THE ASSAY

This immunoassay is based on a sandwich technique.

Wells of supplied plate are coated with a monoclonal antibody specific to insulin.

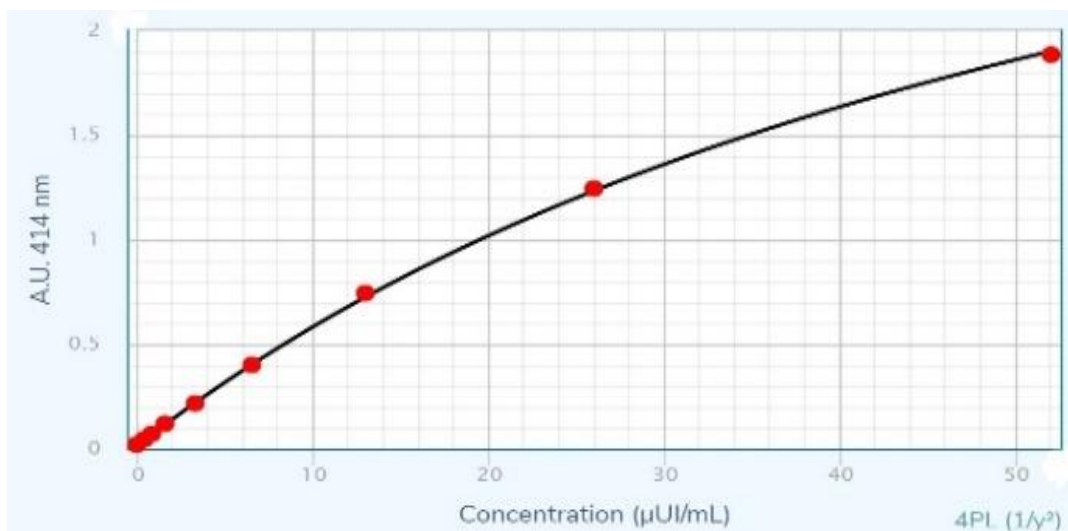
Insulin is introduced in the wells where it is bound by the monoclonal antibody coated on the plate. Insulin is then detected by a insulin specific monoclonal antibody tagged with acetylcholinesterase (AChE). The two antibodies thus form a sandwich by binding on different epitopes of the insulin.

Concentration of insulin is determined by measuring the enzymatic activity of immobilized tracer using Ellman's reagent. AChE tracer acts on Ellman's Reagent to form a yellow compound that strongly absorbs at 405 nm or at 414 nm.



## TECHNICAL DATA

- Sample volume: 5  $\mu$ L
- QC included
- Size: 96 wells
- Strip plates and additional reagents allow for use in multiple experiments
- Application Media: Cell culture supernatant, Serum, Plasma
- Validated species: human
- Shipping: wet ice
- Storage: store at +4°C
- Specificity:
  - ✓ Pig Insulin: 100%
  - ✓ Human Pro-Insuline: not detected
  - ✓ Human C-Peptide: not detected
- Limit of detection:
  - LOD  $\leq$  0.3  $\mu$ IU/mL
  - LOD  $\leq$  11.5pg/mL
- Standard Curve Range:
  - 0.4  $\mu$ IU/mL - 52  $\mu$ IU/mL
  - 15.4 pg/mL - 2000 pg/mL



Typical standard curve

## RELATED PRODUCTS

- Insulinase Inhibitor Cocktail (cat# D05011)
- Insulin (mouse, rat) ELISA kit (cat# A05105)
- Unacylated Ghrelin (human) Easy Sampling ELISA kit (cat# A05319)
- Acylylated Ghrelin (human) Easy Sampling ELISA kit (cat# A05306)
- Unacylated Ghrelin (mouse, rat) Easy Sampling ELISA kit (cat# A05318)
- Acylylated Ghrelin (mouse, rat) Easy Sampling ELISA kit (cat# A05317)