

HBT ELISA TEST KITS FOR HUMAN sIL-1 RII

The IL-1 system includes two agonists (IL-1alpha and IL-1beta), converting enzymes, antagonists, two receptors (IL-1 RI and IL-1 RII) and the IL-1 receptor accessory protein. The IL-1 RII is part of the antagonistic IL-1 mechanism. It is also known as decoy receptor and is a non signaling molecule which functions by capturing IL-1 and preventing it from interacting with the signaling IL-1 RI. The decoy IL-1 RII can after binding to IL-1 also recruit the IL-1 receptor accessory protein and thus inhibit by coreceptor competition. Further a soluble form of IL-1 RII exists which is shed, a process in which matrix metalloproteases have been found to play a role, by various cells including monocytes, polymorphonuclear cells, B cells and fibroblasts. Soluble IL-1 RII (sIL-1 RII) is present in plasma of healthy individuals (approximately 1 - 3 ng/ml) and is enhanced in various inflammatory diseases (up to 50 ng/ml). The Hbt Human sIL-1 RII kits have been developed for the quantitative measurement of natural and recombinant Human sIL-1 RII in serum, plasma and culture medium.

PRINCIPLE OF THE TEST

The Hbt Human sIL-1 RII ELISA test kit is a solid-phase enzyme-linked immunosorbent assay based on the sandwich principle. Samples and standards are incubated in microtiter wells coated with antibodies recognizing Human sIL-1 RII. During this incubation Human sIL-1 RII is captured by solid bound antibody. Unbound material present in the sample is removed by washing. Next biotinylated second antibody (tracer) to Human sIL-1 RII is added to the wells. If sIL-1 RII was present in the sample, the tracer antibodies will bind to the captured sIL-1 RII. The excess tracer is removed by washing. Next a streptavidin-peroxidase conjugate is applied to the wells, this conjugate reacts specifically with the biotinylated tracer antibody bound onto the detected sIL-1 RII. The excess streptavidin-peroxidase conjugate is removed by washing and substrate, tetramethylbenzidine (TMB) is added to the wells. Colour develops proportionally to the amount of human sIL-1 RII present in the sample. The enzyme reaction is stopped by the addition of citric acid and the absorption at 450 nm is measured with a spectrophotometer. A standard curve is obtained by plotting the absorptions versus the corresponding concentrations of the known standards. The human sIL-1 RII concentration of samples with unknown concentrations, which are run concurrently with the standards, can be determined from the standard curve.

SPECIAL FEATURES OF THE KIT

- Ready-to-use (i.e. pre-coated microwells).
- High specificity.
- High reproducibility
- High sensitivity. The minimum concentration which can be measured is 20 pg/ml of sIL-1 RII.
- Large measurable concentration range. Standard curve from 20-5,000 pg/ml.
- Efficient format. Two plates with each twelve 8-well strips allow free choice of batch size for the assay.
- Simple, rapid procedure. Four pipetting steps are required to complete the assay. Working time 3½ hours.

AVAILABILITY

The Hbt Human sIL-1 RII test is available in a kit for 2 x 96 determinations.

PRODUCT NUMBER: HK313

Hbt Human sIL-1 RII ELISA Kit

For research purposes only.

Caution: Not for use in humans.