

# KYNURENINE ELISA

## FOR VARIOUS BIOLOGICAL SAMPLES

### ADVANTAGES

- Speed and ease of use
- Use with different biological samples (e.g. serum, plasma)
- Easy sample preparation (acylation)
- High sensitivity
- No known interferences by medical drugs
- No column purification or extra consumables needed
- Wide standard range without predilution
- Customer Service! – We use the kits we sell and we always offer a 24 hour turn-around time on almost all technical questions

### SPECIFICITY

SUBSTANCE	CROSS REACTIVITY (%)
Tryptophan	0.25
3-Hydroxy-DL-Kynurenin	0.36
5-Hydroxy-DL-Tryptophan	0.05
Tyrosin	0.05
Phenylalanin	0.05
Serotonin	0.05
L-Asparagin	0.05
Kynurenic Acid	0.05

### ESSENTIAL INFORMATION

In a first step the Kynurenine in the sample and standards/controls is acylated. After this the modified Kynurenine is quantitatively determined by ELISA. The ELISA itself uses the microtiter plate format and follows the basic principles of a competitive assay: The antigen is bound to the solid phase of the microtiter plate. The acylated standards, controls and samples and the solid phase bound analyte compete for a fixed number of antibody binding sites. When the system is in equilibrium, free antigen and free antigen-antibody complexes are removed by washing. The antibody bound to the solid phase is detected by an anti-rabbit IgG-peroxidase conjugate using TMB as a substrate. The reaction is monitored at 450 nm. Quantification of unknown samples is achieved by comparing their absorbance with a reference curve prepared with known standards.

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# KYNURENINE

## ESSENTIAL INFORMATION

The essential amino acid tryptophan is a constituent of proteins and is also a substrate for two important biosynthetic pathways: the generation of the neurotransmitter serotonin (5-hydroxytryptamine) and the formation of nicotinamide adenine dinucleotides via different kynurenine derivatives.

L-kynurenine is formed in the mammalian brain (40%) and is taken up from the periphery (60%), indicating that it can be transported across the blood-brain-barrier.

It can be converted by the inducible enzyme indoleamine 2,3-dioxygenase (IDO) into two other important compounds: the neuroprotective kynurenic acid and the neurotoxic quinolinic acid. The kynurenine pathway is also closely linked to the immune system, as different cytokines do influence the activity of the key enzymes.

An unbalanced tryptophan-kynurenine pathway is associated with different kind of diseases such as mental and psychotic disorders (e.g. depressions; Alzheimer's disease; Huntington's chorea), stress, and inflammatory neurological diseases (amyotrophic lateral sclerosis; ALS).

LDN has developed an Enzyme-Linked Immunosorbent Assay (ELISA) which is useful for measuring kynurenine levels under different healthy and pathological conditions.

## KYNURENINE ELISA



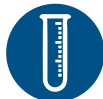
Enzyme-linked immunoassay for the quantitative determination of kynurenine in various biological samples.



Easy sample preparation. Acylation in liquid phase. 96 wells per kit. 6 standards (do not change from lot to lot), 2 controls, ready for use.



Time: sample preparation 1.5 h and ELISA overnight.



Plasma, serum and various biological samples.

## KIT DETAILS KYNURENINE ELISA – TECHNICAL DATA

CAT NO.	SAMPLE SIZE	STANDARDS	SENSIVITY	FORMAT
BA E-2200	10 µl serum or plasma	0/100 - 10000 ng/ml	45.7 ng/ml	96 tests