This Tryptophan ELISA kit enables the quantitative measurement of L-Tryptophan in biological fluids and cell culture supernatants. Intended for *in vitro* diagnostics and research applications, the test comes in 96-well plate format, allowing the screening of large experimental series within short lead times.

**Sample type**
- Biological fluids (urine, plasma, serum, ...) and cell culture supernatant.

**Capacity**
- 96 tests

**Sensitivity**
- < 1.2µg/ml

**Range**
- 2.5 - 250 µg/ml

**Assay time**
- 2h30 sample preparation and ELISA overnight

**Species reactivity**
- Reacts with all species

**References**
- Citations in the litterature
## Product information

### Product overview

<table>
<thead>
<tr>
<th>Product name</th>
<th>Tryptophan ELISA kit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td><em>In vitro diagnostic</em> enzyme immunoassay (ELISA) for the quantitative determination of L-Tryptophan in biological fluids (urine, plasma, serum samples, ...) and cell culture supernatants.</td>
</tr>
<tr>
<td>Labels</td>
<td>IVD, CE</td>
</tr>
<tr>
<td>Format</td>
<td>96-well plate</td>
</tr>
<tr>
<td>Samples</td>
<td>urine, plasma, serum, cell culture supernatant</td>
</tr>
<tr>
<td>Sample volume</td>
<td>20 µL</td>
</tr>
<tr>
<td>Cross species-reactivity</td>
<td>React with all species</td>
</tr>
<tr>
<td>Standard range</td>
<td>2.5 - 250 µg/ml</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>&lt; 1.2µg/ml</td>
</tr>
<tr>
<td>Specificity</td>
<td>No significant cross-reactivity was observed with L-Tryptophan analogs such as 5-Hydroxy-L-tryptophan, Tryptamine, 5-Methoxytryptophan, 5-Hydroxytryptamine, N-acetyl-5-hydroxytryptamine.</td>
</tr>
<tr>
<td>Assay time</td>
<td>Sample preparation 2.5 hours and ELISA overnight</td>
</tr>
<tr>
<td>Storage</td>
<td>Store at 2-8°C for to 6 months.</td>
</tr>
<tr>
<td>Datasheets</td>
<td>Instructions for use, Material safety datasheet</td>
</tr>
</tbody>
</table>
Protocols

Sample collection & storage

**Urine:** spontaneous or 24-hour urine collected in bottle with 10-15 mL of 6 M HCl, stored at -20°C for long periods (up to 6 months)

**Plasma/Serum:** EDTA-, Heparin- or Citrate- samples stored at 2-8°C for up to 48h or -20°C for longer period (up to 6 months). Do not use haemolytic or lipemic samples.

Sample preparation

Sample precipitation (15 min) and derivatization (2h15)

ELISA

Tryptophan antiserum overnight incubation, revelation and read steps (1h).

Detailed protocol

Download instructions for use

References

PrProduct citations :

● Watanabe et al. Adding indoximod to hypofractionated radiotherapy with anti-PD-1 checkpoint blockade enhances early NK and CD8+ T cell-dependent tumor activity. Clin Cancer Res. 2019 Nov 6


● Toulmonde et al. Use of PD-1 Targeting, Macrophage Infiltration, and IDO Pathway Activation in Sarcomas. JAMA Oncol. 2018 Jan 14

Determination of L-Tryptophan levels in CT26 cell cultures by ELISA

Murine CT26 tumor cell line was stably transfected with either empty vector (Mock) or vector containing cDNA encoding for indoleamine 2,3 dioxygenase (IDO1). Cells were cultured for 48 hours and Tryptophan was measured using the Tryptophan ELISA kit. As expected, Tryptophan level was significantly lower in IDO1-proficient CT26 cells than in mock or parental (WT) CT26 cell lines.

Tryptophan ELISA: Standard curve

Standard curve - to be generated every time the assay is performed.

L-Tryptophan ELISA Kit

Essential amino acid L-Tryptophan is either converted into Serotonin in the gut or brain by tryptophan hydroxylase (TPH), or metabolized by various cell types to form L-Kynurenine through enzymes indoleamine 2,3-dioxygenase (IDO1/2) or tryptophan 2,3-dioxygenase (TDO2). Abnormal tryptophan metabolism is found in a wide range of pathologies, including metabolic and auto-immune diseases, viral infections, cancer, as well as neurodegenerative and mood disorders.
Contact information

IMMUSMOL SAS
229 Cours de l'Argonne
33000 Bordeaux - France
Tel: +33 (0)5 6431 1170
www.immusmol.com

To order, review, ask for technical support, visit product page at: