Agrisera
Part of Thermo Fisher Scientific

This product is **for research use only** (not for diagnostic or therapeutic use) **contact: support@agrisera.com**

Agrisera AB | Box 57 | SE-91121 Vännäs | Sweden | +46 (0)935 33 000 | www.agrisera.com

Trans-zeatin riboside | Cytokinin ELISA quantitation kit

Qty: AS11 1784

AS11 1784 | Reactivity: **Trans-zeatin riboside**

Price: 1350 €

Background: This ELISA assay utilise the principle of competitive binding to measure the concentration of hormone in plant extracts. The trans-zeatin riboside specific antibodies are precoated to the surface of the reaction wells. The plant extract sample, containing an unknown amount of hormone, is mixed in the reaction well with a known amount of a tracer to react with a limited number of antibodies in the reaction wells. During incubation the hormone in the sample competes with the tracer for the antibody binding sites. Unbound hormone, tracer and plant extract are washed out of the reaction wells. Following substrate addition which reacts with a tracer bound to the antibody and produces a yellow-coloured product. The absorbance of the sample is converted to concentration of hormone by means of a standard curve which is produced by simultaneously treating standards along with the samples.

Reaction wells: Antibody coated and blocked, 5pcs for 480 assays, 60 strips with 8 wells

Tracer: 20-50 µl

Tracer diluent: 5x250 mM TBS Tris, 10 mM NaCl, 1 mM MgCl2, pH 7.5 stock + 0.02 % NaN_3

Reaction and wash solution: 10x TBS stock+0.02 % NaN_3

Stopping reagent: 2x 5 N KOH stock

Substrate diluent: 10x 500 mM $NaHCO_3$ stock, pH 9.6+0 0.02 %. 0 0.02 % NaN_3

Substrate: 100 mg

Standards: 600 µl of each; 15.6 pmol, 7.8 pmol, 3.9 pmol, 1.95 pmol, 975 fmol, 488 fmol, 244 fmol, 122 fmol, 61 fmol, 30.5 fmol, 15.2 fmol

Assay development time: 4-5 hours

Sensitivity: 0.01 to 10 pmol/50 µl

Plant extract volume: 50 µl

Important note: Do **NOT** methylate cytokinin samples as this will significantly decrease the sensitivity of the assay.

Assay parameters

Unspecific binding: 2.5 %

Midrange(B/Bo=50%): 0.02-10 pmol

Detection limit: 12.25 pg (7 fmol)

Linear range of measurment: 15-500 fmol

Intraassay variability: 3.6 %

Interassay variability: 4.3 %

Agrisera
Part of Thermo Fisher Scientific

This product is **for research use only** (not for diagnostic or therapeutic use) **contact: support@agrisera.com**

Agrisera AB | Box 57 | SE-91121 Vännäs | Sweden | +46 (0)935 33 000 | www.agrisera.com

Amount of tracer per assay: 10 ng

Expiry date: 6 months from purchase

Sample clean-up:
Processing of plant extracts required prior ELISA analysis may vary from plant to plant and will depend upon the actual research objectivce. In most cases pigments and lipophilic material needs to be removed by C18 reversed phase chromatography and subsequently by combined DEAE-cellulose-reversed phase C18 columns.

Samples from algae and bacteria can be analyzed directly or after pre-purification.

Example of extraction and purification from plant tissues:
Frozen plant tissues are ground to a fine powder under liquid nitrogen. The powder is extracted in ice-cold 70% ethanol (10 ml . g-1 FW) containing sodium diethyldithiocarbamate asantioxidant (400 ug . g-1 FW). About 420 Bq (25.000 dpm) of [2-^{3}H] auxin tracer is added to the extracts to monitor for losses during purification steps and to validate the chromatographic data. After 2 h extraction, the homogenate is centrifuged (15 000 g, 4°C) and pellets re-extracted by the same way. The combined extracts are then purified over a reversed phase C18 column to eliminate chlorophyll and lipids. The extracts are subsequently concentrated to approx. 1.0 ml by rotary evaporation under vacuum at 35°C. The samples are diluted to 20 ml with ammonium acetate buffer (40 mM, pH 6.5) containing sodium diethyldithiocarbamate. For the immunoassay dilution analysis, the 2 ml of eluates is dried in vacuo and re-dissolved in Tris-buffered saline (TBS, 50 mM Tris, 10 mM NaCl, 1 mM $MgCl_2$, pH 7.5). Aliquots of these solutions are eitheranalysed in serial dilutions or mixed with known amounts of IAA standards and then analysed by ELISAs. The extracts are further purified using combined diethylaminoethylcellulose (1.0 x 5.0 cm) - octadecylsilica (0.5 x 1.5 cm) columns. IAA and its amino acid metabolites are loaded onto a DEAE column cartridge which is then washed with 10 ml dest. water and eluted in 5 ml 6% HCOOH (v/v). The eluates are loaded onto a C18 cartridge and after washing with 5 ml dest. water eluted with 5 ml methanol. The eluates are than evaporated to dryness, dissolved in 50 ul 70% ethanol + 250 ul dest. water and filtered through a HPLC pre-filter (0.22 um). The IAA samples have to be methylated by diazomethane before ELISA analysis.

Manual in Pdf

Bulk purchase possible – please inquire.

- Product Info
- Immunogen:
- Additional Information
- Additional information: Trans-zeatin riboside | Cytokinin ELISA quantitation kit