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Product no AS26 5145

GABA | Gamma-Aminobutyric Acid ELISA quantitation kit (48T)

Product information

Background:

This ELISA assay utilizes the principle of competitive binding to measure the concentration of plant GABA (Gamma-Aminobutyric Acid) in plant extracts. The GABA has been pre-coated on the surface of the reaction wells. The plant extract sample, containing unknown amount of GABA, or standards, are mixed in the appropriate reaction wells with a known amount of the biotin-conjugated anti-GABA antibody. During incubation, the competitive inhibition reaction occurs between pre-coated GABA and GABA in the samples with the GABA-specific antibody.

Unbound GABA and plant extract are washed out of the reaction wells. Avidin conjugated to Horseradish Peroxidase (HRP) is added to each microplate well and incubated followed by the addition of TMB substrate solution for the reaction development. The enzyme-substrate reaction is terminated by the addition of sulphuric acid solution, and the colour change is measured spectrophotometrically at a wavelength of 450 nm ± 10 nm. The colour develops in opposite to the amount of GABA in the sample or standards. The concentration of GABA in the samples is then determined by comparing the OD of the samples to the standard curve.

Reaction wells: 48T (8 strips x 8 wells)

Assay development time: 2.5 hours

Sensitivity: **15.3** ng/ml

Detection range: 31.25-2000 pg/ml

Intra-assay Precision (Precision within an assay): CV% < 8%

Three samples of known concentration were tested twenty times on one plate to assess intra-assay precision.

Inter-assay Precision (Precision between assays): CV% < 10%

Three samples of known concentration were tested in forty separate assays to assess inter-assay precision.

Plant extract volume: 50 µl/well

Detection wavelength: 450 nm

Cross reactivity to other plant hormones: No significant cross-reactivity or interference between GABA and analogues was observed.

Sample type: plant tissues

Expiry date: 6 months from purchase

Storage: 2-8°C

Product citation: to be added when available.

Manual in Pdf

Application information