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Product no AS26 5160

MIOX | Myo Inositol Oxygenase ELISA quantitation kit (5*96T)

Product information

Background: plant myo-inositol oxygenase (MIOX) is an essential enzyme that catalyzes the first step of myo-inositol catabolism by oxidation of myo-inositol into D-glucuronic acid, which is then converted into UDP-glucuronic acid. This plays a critical role in cell wall biosynthesis, vitamin C (ascorbic acid) production, and plant stress tolerance. The test principle applied in this kit is Sandwich enzyme immunoassay. The microtiter plate provided in this kit has been pre-coated with an antibody specific to Plant MIOX. Standards or samples are added to the appropriate microtiter plate wells then with a biotin-conjugated antibody specific to Plant MIOX. Next, Avidin conjugated to Horseradish Peroxidase (HRP) is added to each microplate well and incubated. After TMB substrate solution is added, only those wells that contain Plant MIOX, biotin-conjugated antibody and enzyme-conjugated Avidin will exhibit a change in colour. The enzyme-substrate reaction is terminated by the addition of sulphuric acid solution and the colour change is measured spectrophotometrically at a wavelength of 450nm ± 10nm. The concentration of Plant MIOX in the samples is then determined by comparing the OD of the samples to the standard curve.

Reaction wells: 5x96 wells (five set ups of 12 strips x 8 wells)

Assay development time: 2.5 hours

Sensitivity: 0.054 ng/ml

Detection range: 0.16-10 ng/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: This assay has high sensitivity and excellent specificity for detection of Plant MIOX. No significant cross-reactivity or interference between Plant MIOX 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