Datasheet for ABIN368385

Abscisic Acid ELISA Kit

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Overview

Quantity:	96 tests
Target:	Abscisic Acid (ABA)
Reactivity:	Plant
Method Type:	Competition ELISA
Detection Range:	0.156-10 µg/mL
Minimum Detection Limit:	0.156 µg/mL
Application:	ELISA

Product Details

Purpose:	For the quantitative determination of endogenic plant hormone abscisic acid (ABA) concentrations in plant tissues. This assay employs the competitive inhibition enzyme immunoassay technique. The microtiter plate provided in this kit has been pre-coated with antigen. Standards or samples are added to the appropriate microtiter plate wells with an antibody specific for ABA. The competitive inhibition reaction is launched between with pre-coated ABA and ABA in samples with the antibody. Then add a Horseradish Peroxidase (HRP) conjugated IgG antibody. A substrate solution is added to the wells and the color develops in opposite to the amount of ABA in the sample. The color development is stopped and the intensity of the color is measured.
Sample Type:	Plant Tissue
Analytical Method:	Quantitative
Detection Method:	Colorimetric

Product Details

Cross-Reactivity (Details):	Limited by current skills and knowledge, it is impossible for us to complete the cross-reactivity detection between the target antigen and all analogues for other species. Therefore, cross reaction may still exist.
Sensitivity:	0.04 μg/mL
Components:	• Assay plate • Standard (10 x concentrate) • Antibody (100 x concentrate) • HRP-conjugate (100 x concentrate) • Antibody Diluent • Sample Diluent • HRP-conjugate Diluent • Sample Extraction Buffer (25 x concentrate) • Wash Buffer (25 x concentrate) • TMB Substrate • Stop Solution • Adhesive Strip

Target Details

Target:	Abscisic Acid (ABA)
Alternative Name:	hormone abscisic acid (ABA) (ABA Products)

Application Details

Application Notes:	• The supplier is only responsible for the kit itself, but not for the samples consumed during the assay. The user should calculate the possible amount of the samples used in the whole test. Please reserve sufficient samples in advance. • Samples to be used within 5 days may be stored at 2-8°C, otherwise samples must be stored at -20°C (≤ 1 month) or -80°C (≤ 2 months) to avoid loss of bioactivity and contamination. • Grossly hemolyzed samples are not suitable for use in this assay. • If the samples are not indicated in the manual, a preliminary experiment to determine the validity of the kit is necessary. • Please predict the concentration before assaying. If values for these are not within the range of the standard curve, users must determine the optimal sample dilutions for their particular experiments. • Tissue or cell extraction samples prepared by chemical lysis buffer may cause unexpected ELISA results due to the impacts of certain chemicals. • Owing to the possibility of mismatching between antigens from another resource and antibodies used in this supplier's kits (e.g., antibody targets conformational epitope rather than linear epitope), some native or recombinant proteins from other manufacturers may not

	be recognized by this supplier's products. • Influenced by factors including cell viability, cell number and cell sampling time, samples from cell culture supernatant may not be recognized by the kit. • Fresh samples without long time storage are recommended for the test. Otherwise, protein degradation and denaturalization may occur in those samples and finally lead to wrong results.
Comment:	Detection wavelength: 450 nm Information on standard material: Depending on the antigen to be detected, standards can be either native or recombinant protein. The recombinant proteins are being expressed in CHO cells in most cases. Please inquire for more information. The formulation of auxiliary material in the standard is considered proprietary information, however it does not contain any poisonous substance. Proclin 300 (1:3000) is used as preservative. Information on reagents: In most cases the stop solution provided is 1 N H2SO4. The formulation of wash solution is proprietary information. None of the components contain (sodium) azide, thimerosal, 2-mercaptoethanol (2-ME) or any other poisonous materials. For the sandwich method kits, the sample diluent, antibody diluent, enzyme diluent and standard all contain BSA. Information on antibodies: The antibodies provided in different kits vary in regards to clonality and host. Some antibodies are affinity purified, some are Protein A
Sample Volume:	50 µL
Assay Time:	1 - 4.5 h
Plate:	Pre-coated
Protocol:	1. Prepare reagents, samples and standards as instructed. 2. Set a Blank well without any solution. 3. Add 50 µL standard or sample to each well. 4. Add 50µl of Antibody (1x) to each well (not to Blank well) 5. Incubate for 30 minutes at 37°C 6. Aspirate and wash 3 times. 7. Add 50 µL HRP-conjugate (1x) to each well (Not to Blank well). 8. Incubate 1 hour at 37 °C 9. Aspirate and wash 3 times.

10. Add 90 µL of TMB Substrate to each well. Incubate for 20 minutes at 37 °C. Protect from light.
11. Add 50 µL Stop Solution to each well. Read at 450 nm within 10 minutes.

Reagent Preparation:

Note:

- Kindly use graduated containers to prepare the reagent.
- Bring all reagents to room temperature (18-25 °C) before use for 30 min.
- Prepare fresh standard for each assay. Use within 4 hours and discard after use.
- Making serial dilution in the wells directly is not permitted.
- To minimize imprecision caused by pipetting, use small volumes and ensure that pipettors are calibrated. It is recommended to suck more than 10 µL for once pipetting.
- Distilled water is recommended to be used to make the preparation for reagents. Contaminated water or container for reagent preparation will influence the detection result.
- Antibody (1x) - Centrifuge the vial before opening. Antibody requires a 100-fold dilution. A suggested 100-fold dilution is 10 µL of Antibody + 990 µL of Antibody Diluent.
- HRP-conjugate (1x) - Centrifuge the vial before opening. HRP- conjugate requires a 100-fold dilution. A suggested 100-fold dilution is 10 µL of HRP- conjugate + 990 µL of HRP- conjugate Diluent.
- Sample Extraction Buffer(1x)- If crystals have formed in the concentrate, warm up to room temperature and mix gently until the crystals have completely dissolved. Dilute 20 mL of Sample Extraction Buffer Concentrate (25 x) into deionized or distilled water to prepare 500 mL of Sample Extraction Buffer(1x).
- Wash Buffer(1x)- If crystals have formed in the concentrate, warm up to room temperature and mix gently until the crystals have completely dissolved. Dilute 20 mL of Wash Buffer Concentrate (25 x) into deionized or distilled water to prepare 500 mL of Wash Buffer (1 x).
- Standard Centrifuge the standard vial at 6000-10000rpm for 30s before opening. Dilute the Standard(10x) with Sample Diluent. A suggested 10-fold dilution is 50 µL of Standard(10x) + 450 µL of Sample Diluent. This diluted Standard (S7) serves as the high standard (10 µg/mL). Do not substitute other diluents. Mix the standard to ensure complete dilution and allow the standard to sit for a minimum of 15 minutes with gentle agitation prior to making dilutions. Pipette 250 µL of Sample Diluent into each tube (S0-S6). Use the diluted Standard (S7) solution to produce a 2-fold dilution series (below). Mix each tube thoroughly before the next transfer. Sample Diluent serves as the zero standard (0 µg/mL).

Sample Preparation:

Xylem saps from plants Xylem sap from wild plants can be obtained by cutting the plant about 10-15 cm above the ground (preferably early in the morning, to fully utilize the root pressure). Xylem sap collects in the silicon tube through root pressure. If there is risk of too much exposure to light, the tube should be wrapped in aluminum foil. Depending on the plant and the treatment, about 0.5mL should be obtained within 1-2 hours. The sap is collected from the silicon tube into an Eppendorf-vial, using a pipette, immediately frozen and stored for analysis at -80°C. This method has been used successfully on wheat, oil seed rape, maize and rice.

Crude extracts Crude extracts of gingko, phoenix tree, rape ect have been tested to date with

Application Details

	the extraction method describe below. Weigh out 0.5 g of freeze dried, finely ground material into a centrifuge tube containing 4.5 ml of sample extraction buffer. Shake the samples overnight in the cold (4-5°C) and dark. Spin down the solids and use the supernatant directly or diluted with buffer or H2O in the ELISA. For materials other than the ones mentioned above, the validity of this extraction method should be tested by both, cross-reaction test and confirming measurements with a HPLC- GC set-up.(Dilution factor: 10)
Assay Precision:	Intra-assay precision (precision within an assay): Three samples of known concentration were tested twenty times on one plate to assess precision. Inter-assay precision (precision between assays): Three samples of known concentration were tested in twenty assays to assess precision. • Intra-assay: CV% less than 8% • Inter-assay: CV% less than 10%
Restrictions:	For Research Use only

Handling

Precaution of Use:	The Stop Solution provided with this kit is an acid solution. Wear eye, hand, face and clothing protection when using this material.
Handling Advice:	• The kit should not be used beyond the expiration date on the kit label. • Do not mix or substitute reagents with those from other lots or sources. • If samples generate values higher than the highest standard, dilute the samples with Sample Diluent and repeat the assay. • Any variation in Sample Diluent, operator, pipetting technique, washing technique, incubation time/temperature and kit age can cause variation in binding. • This assay is designed to eliminate interference by soluble receptors, binding proteins and other factors present in biological samples. Until all factors have been tested in the Immunoassay, the possibility of interference cannot be excluded.
Storage:	4 °C/-20 °C
Storage Comment:	For unopened kit: All the reagents should be kept according to the labels on vials.
Expiry Date:	6 months

Publications

Product cited in:	Cheng, Chen, Fang, An, Hu, Huang: "Comparative transcriptome analysis reveals an early gene expression profile that contributes to cold resistance in Hevea brasiliensis (the Para rubber tree)." in: **Tree physiology**, Vol. 38, Issue 9, pp. 1409-1423, (2019) (PubMed).

Publications

Luo, Shen, Jin, Huang, Cheng, Wang, Li, Zhao, Bao, Ning: "Overexpression of Rosa rugosa anthocyanidin reductase enhances tobacco tolerance to abiotic stress through increased ROS scavenging and modulation of ABA signaling." in: **Plant science : an international journal of experimental plant biology**, Vol. 245, pp. 35-49, (2016) (PubMed).

Ding, Zhang, Luo, Zhou, Zhong, Yang, Xiao, Shu, Tan: "Gene Overexpression and RNA Silencing Tools for the Genetic Manipulation of the S-(+)-Abscisic Acid Producing Ascomycete Botrytis cinerea." in: **International journal of molecular sciences**, Vol. 16, Issue 5, pp. 10301-23, (2015) (PubMed).

Chen, Zhou, Wu, Wang, Wang: "FTO-dependent function of N6-methyladenosine is involved in the hepatoprotective effects of betaine on adolescent mice." in: **Journal of physiology and biochemistry**, (2015) (PubMed).

Images

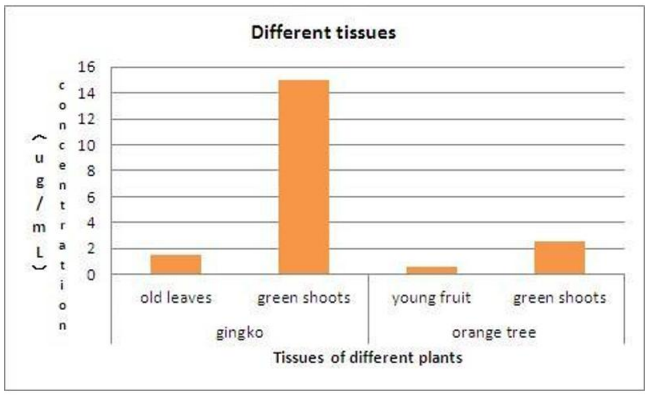

Image 1.

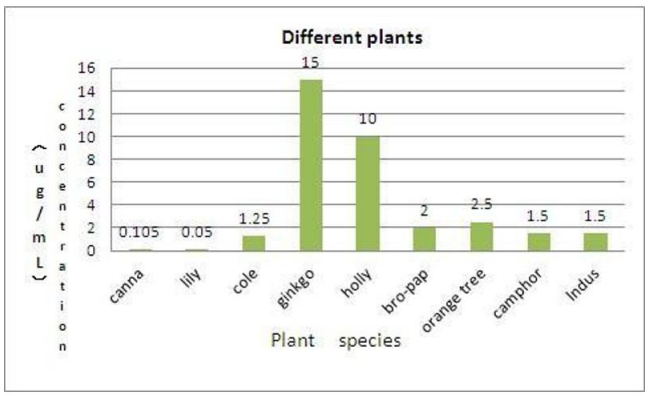

Image 2.

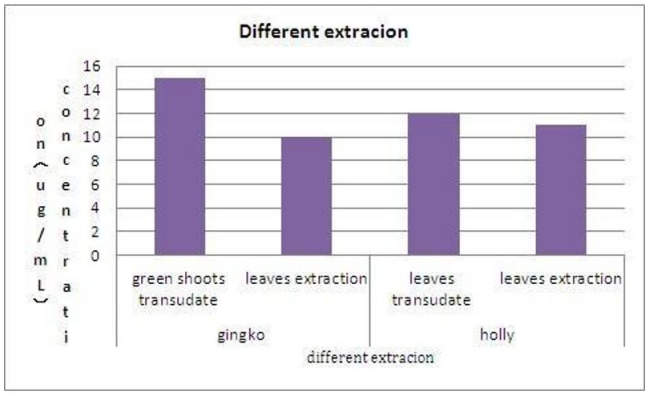

Image 3.

Please check the product details page for more images. Overall 6 images are available for ABIN368385.