

Product Information

Anti-Auxin Antibody, Mouse Monoclonal

Clone 1E11-C11, purified from hybridoma cell culture

A0855

Product Description

Anti-Auxin antibody, Mouse monoclonal is derived from the hybridoma 1E11-C11 produced by the fusion of mouse myeloma cells (P3-X63/Ag 8.653) cells) and splenocytes from CB6F1/J mice immunized with indoleacetic acid (IAA) carboxyl linked to ovalbumin.¹ The isotype is determined by a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents, Cat. No. ISO2.

Anti-Auxin antibody, Mouse monoclonal recognizes indoleacetic acid but not free unmethylated IAA.¹ The antibody may be used in ELISA,^{1, 3} immunoblotting,¹ dot-blot,¹ and immunohistochemistry.^{2, 4}

Phytohormones play a critical role in plant growth and development. The hormone auxin acts on cells by altering the turgor, elongation, division, and differentiation. Auxin induces the expression of specific genes necessary to regulate growth processes. In most plants, indoleacetic acid is recognized as the key auxin. IAA is synthesized from tryptophan (Trp) using Trp-dependent pathways and from an indolic Trp precursor via Trp-independent pathways.¹⁻²

IAA may be obtained in plants also by β -oxidation of indole-3-butyric acid (IBA) or by hydrolyzing IAA conjugates (IAA may be found linked to amino acids, sugars, or peptides). Conjugation and oxidation of IAA by plants serves to inactivate the hormone. IAA is transported all through the plant (shoot to root) and this transport is important for normal development. Localized transport is needed for tropic responses. The cell signaling of Auxin is mediated through the SCFTIR1 E3 ubiquitin ligase complex. This complex is responsible for the degradation of the transcription repressor Aux/IAA and thereby alters gene expression. The Auxin signal is negatively controlled by auxin-induced genes that encode negatively acting products.¹⁻⁵

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

Antibody Concentration: ~2 mg/mL

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing, or storage in "frost-free to freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Indirect ELISA: a working antibody concentration of 1-2 µg/mL is recommended using IAA conjugated to BSA as substrate.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining optimal working dilutions by titration.

References

1. Leverone, L.A., et al., *Plant Physiol.*, 96, 1076-1078 (1991).
2. Avsian-Kretchmer, O., et al., *Plant Physiol.*, 130, 199-209 (2002).
3. Pence, V.C., and Caruso, J.L., In: *Plant Hormones and their role in plant growth and development*, Ed. Davies, P.J., Martinus Nijhoff Publishers, Boston, pp 240-256 (1987).
4. Jiang, K., et al., *Development*, 130, 1429-1438 (2003).
5. Woodward, A.W., and Bartel, B., *Annals Botany*, 95, 707-735 (2005).

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