



CONSTANS (at-50): sc-33753

BACKGROUND

Arabidopsis development is mediated by several environmental stimuli. Light plays an important role in many developmental processes, including photosynthesis, chloroplast biogenesis, leaf initiation and floral induction. Several light sensitive proteins are thought to mediate the transition from vegetative to floral development in response to photoperiods. CONSTANS (CO) promotes flowering in response to long photoperiods. When CONSTANS is mutated, flowering is delayed during long photoperiods, but is not affected during short photoperiods. ZEITLUPE (ZTL) and FKF1 influence flowering by modulating the circadian clock in *Arabidopsis*.

REFERENCES

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2. Coupland, G., Igeno, M.I., Simon, R., Schaffer, R., Murtas, G., Reeves, P., Robson, F., Pineiro, M., Costa, M., Lee, K. and Suarez-Lopez, P. 1998. The regulation of flowering time by daylength in *Arabidopsis*. *Symp. Soc. Exp. Biol.* 51: 105-110.
3. Somers, D.E., Schultz, T.F., Milnamow, M. and Kay, S.A. 2000. ZEITLUPE encodes a novel clock-associated PAS protein from *Arabidopsis*. *Cell* 101: 319-329.
4. Nelson, D.C., Lasswell, J., Rogg, L.E., Cohen, M.A. and Bartel, B. 2000. FKF1, a clock-controlled gene that regulates the transition to flowering in *Arabidopsis*. *Cell* 101: 331-340.
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6. Samach, A., Onouchi, H., Gold, S.E., Ditta, G.S., Schwarz-Sommer, Z., Yanofsky, M.F. and Coupland, G. 2000. Distinct roles of CONSTANS target genes in reproductive development of *Arabidopsis*. *Science* 288: 1613-1616.

SOURCE

CONSTANS (at-50) is a rabbit polyclonal antibody raised against amino acids 181-230 mapping within an internal region of CONSTANS of *Arabidopsis thaliana* origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

CONSTANS (at-50) is recommended for detection of CONSTANS of *Arabidopsis thaliana* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1–2 µg per 100–500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

For research use only, not for use in diagnostic procedures.