

BBX32 Protein

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BBX32 Protein Latest News

Researchers from the Indian Institute of Science Education and Research (IISER), Bhopal, have found that a single protein BBX32 helps plants time their first step from darkness into light.

About BBX32 Protein

- It is a **B-box (BBX) protein** (B-box play an important role in plant growth and development).
- It helps provide leads to control the **timing of seedling emergence** and help maximise proper seedling establishment.

How does it work?

- When a **seed sprouts in darkness** under the soil, its stem curves into a small hook shape that protects the delicate shoot tip as it pushes upward.
- The hook needs to stay 'closed' until the seedling breaks through the soil and meets light.

- Ethylene is a plant hormone that **builds up underground** and light work together to decide exactly when the hook opens.
- 'BBX32' helps in **plant growth regulation** by **keeping its first leaves folded** until they emerge from the soil and thus provide crucial aid in the seedling establishment process.
- BBX32 was found to work by raising the activity of the **PIF3 protein**, which switched on HLS1, which kept the hook closed. If PIF3 was missing, BBX32 couldn't prevent the hook from opening.

BBX32 Protein FAQs

Q1: What is called a protein?

Ans: Proteins are made up of hundreds or thousands of smaller units called amino acids, which are attached to one another in long chains

Q2: What is protein function?

Ans: Proteins serve as structural support, biochemical catalysts, hormones, enzymes, building blocks, and initiators of cellular death.

Source: TH

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