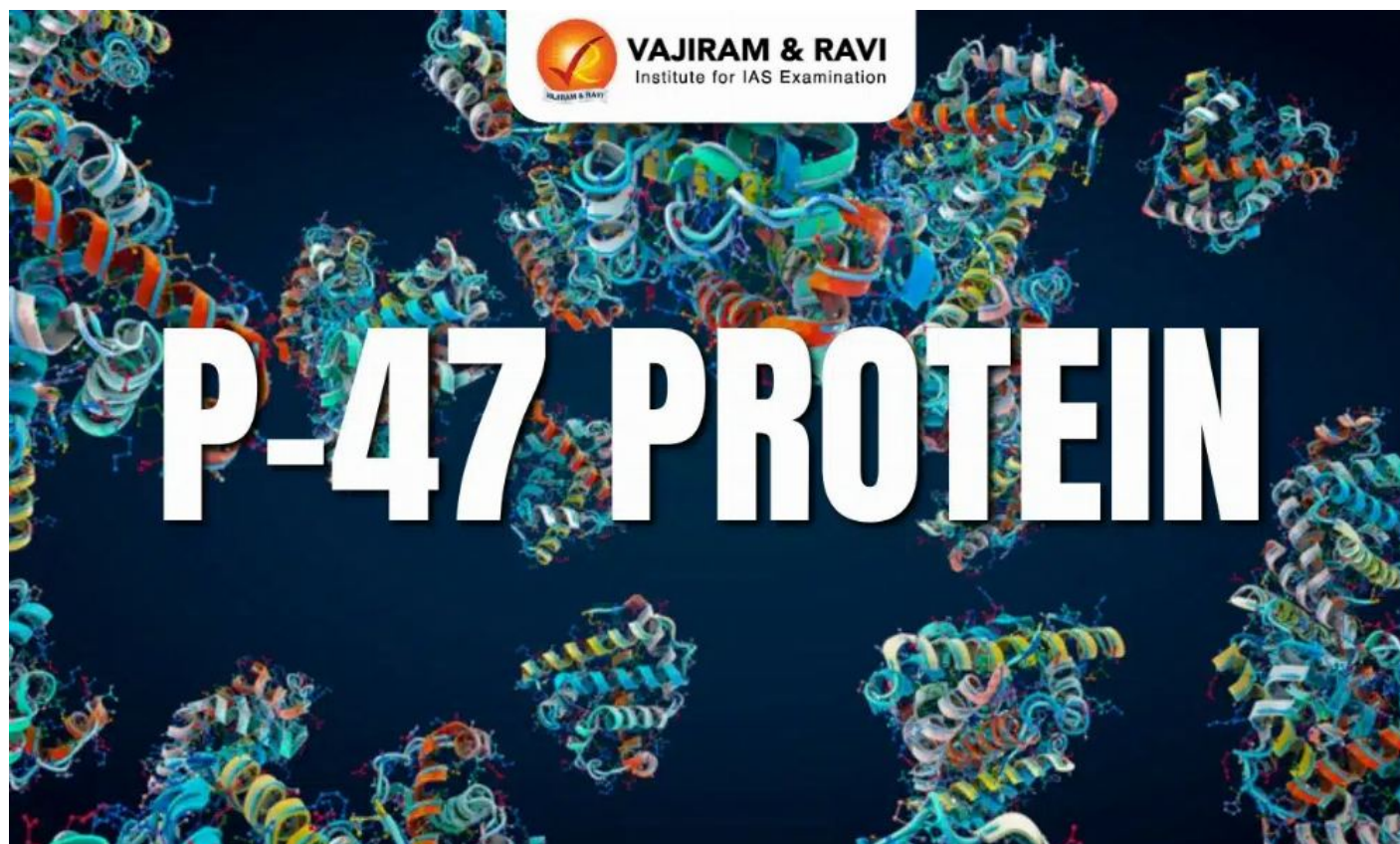


P-47 Protein

September 6, 2025 • vajiramandravi.com



P-47 Protein Latest News

Researchers at the S. N. Bose National Centre for Basic Sciences (SNBNCBS) highlighted protein p47's unexpected ability to act as a "mechanical chaperone."

About P-47 Protein

- It is a **cofactor protein** usually known as a helper for the **cellular machine p97** (It is a powerhouse involved in moving and degrading proteins).
- It was long thought to be just an assistant known primarily for its role **in protein trafficking, degradation, and membrane fusion.**

Highlight of the Study

- It is revealed that p47 can enhance the **mechanical efficiency** of protein extraction from the **endoplasmic reticulum** (ER) lumen into the cytoplasm.

- P47 stabilizes polypeptides under stress and guides them through narrow pores, **reduces the risk of misfolding** and improves the **success of protein translocation**.
- This finding represents the first direct, single-molecule evidence that cofactors like p47 possess **autonomous, force-dependent chaperone-like activity**.
- It is found that p47 is not just a passive helper for p97, it can directly stabilize proteins under force, effectively **acting as a “mechanical chaperone.”**
- The findings suggest that targeting mechanical cofactors like p47 could lead to novel therapeutic strategies for **diseases linked to protein instability**.

Source: PIB

Source: <https://vajiramandravi.com/current-affairs/p-47-protein/>

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