

Cathepsin B

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Cathepsin B Latest News

Researchers at the National Institute of Animal Biotechnology (NIAB) found that reducing the activity of a cellular protein called 'Cathepsin B' (Cat B) helps preserve the ovarian reserve.

About Cathepsin B

- It is a **lysosomal cysteine protease**.
- It is primarily localized within subcellular endosomal and **lysosomal compartments**. It is involved in the turnover of intracellular and extracellular proteins.
- It is integrated into almost all **lysosome-related processes**, including protein turnover, degradation, lysosome-mediated cell death, **antigen processing, and apoptosis**
- It degrades extracellular matrix proteins like collagen and fibronectin.
- **Role in Disease:** It is involved in **neuropathological and neurodegenerative diseases** such as dementia, Alzheimer's disease, and traumatic brain injury.

What is Ovarian Reserve?

- This ovarian reserve is the **finite pool of egg cells** (oocytes) that female mammals are born with. Unlike sperm, these crucial egg cells cannot be regenerated.
- Over time, the quantity and quality of these eggs naturally decline due to factors **like oxidative stress, inflammation and general cellular wear**.
- This process **accelerates with age**. 'Cat B,' a protein-degrading enzyme, seems to be a key driver of this decline.
- By lowering its levels, we may be able to delay egg loss, effectively extending fertility naturally.

Source: TH

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