

Commercial production of bovine somatotropin

[Science](#), [Biology](#)



Somatropin is a hormone naturally released by the Anterior Pituitary gland. Its release is mediated by the releasing hormone produced by the Hypothalamus, Growth Hormone releasing factor. Somatropin is a peptide hormone. It promotes normal body growth and lactation.

Bovine Somatropin is the Somatropin produced in cattle. Since the hormone is a peptide, it is digested by peptidases in the gastrointestinal tract hence, it is not orally active. Somatropin is produced commercially using Recombinant DNA technology. The Somatropin so produced is called Recombinant bovine Somatropin (rBST). A bacteria e. g.

E coli is used. The gene that codes for Somatropin is identified in the cow DNA and inserted into the DNA of E. coli. The E. coli is fermented and thus, the Somatropin is produced en masse. Through a process of isolation and purification, fairly large, commercial quantities are produced. The product may be marketed as a weekly or fortnightly injection. rBST is of immense value to the cattle industry as it significantly increases the yield of milk produced by cattle. This is done by increasing the appetite of these cattle. Also the blood flow to the mammary gland is increased as it increases cardiac output.

Also it has been reported in literature that the administration of Somatropin leads to a decrease in body fat level. This could mean healthier meats to eat. However, it produces a negative influence on the level of reproduction in animals chronically on bovine Somatropin. Also an increased risk of mastitis is also suggested in animals on which the hormone is administered.

REFERENCES. 1. F. Laurent, B. Vignon and D. Coomas (1992). Influence of Bovine Somatotropin on the Composition and Manufacturing Properties of
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