Regulation

TSH is the major regulator of thyroid function. The TSH-R is a G-protein coupled receptor present on the basolateral membrane of follicular cells. When TSH binds to the TSH-R, adenylyl cyclase is activated and cyclic AMP is produced. This cascade ultimately leads to increased transcription and translation of thyroglobulin and synthesis of thyroid hormones. IGF-I, EGF, TGF-B, endothelins, and some cytokines also play a lesser part in the regulation of thyroid synthesis, but their roles are poorly understood.

References: