

The sequence of isolated endogenous substance P was confirmed through synthesis of the peptide by solid-phase peptide synthesis using a benzhydrylamine resin which, upon HF cleavage, yields the C-terminus amide directly. The biological properties of both the synthetic and the natural substances are qualitatively and quantitatively identical. The smallest sequence possessing most of the Substance P spectrum of activity and high potency is the hexapeptide C-terminus.

3.5 Thyroliberin (TRF)

Thyroliberin (TRF) originally was purified from alcohol-acid extracts of ovine and porcine hypothalamic extracts. Its greatest concentration is found in the mammalian central nervous system. It is also present in the blood, urine, cerebrospinal fluid, and endocrine pancreas. A macromolecule similar to TRF (as determined by physical and immunochemical properties), and that generates TRF upon trypsin and carboxypeptidases digestion, has also been reported in frog-brain extracts.

TRF's ability to stimulate TSH secretion in the rat and mouse justified its purification from hypothalamic extracts. It was subsequently found to release prolactin (PRL) and GH under specific conditions. TRF has been reported to alleviate depressive symptoms. It also reportedly reverses the duration of anesthesia and hypothermia induced by a number of substances. It may also increase