

HGH, Human growth hormone

see also **Somatotropic hormone**; and the more stable markers: **IGF-1** and **IGFBP3**

General:

Somatotroph hormon (STH, synonym: Human Growth Hormone, HGH, GH) is produced in the pituitary gland and stimulates growth. It has an anti-insulinic, anabolic, anti-sodiumuretic and lipolytic effect. Due to its short half-life (15 to 20 min.) it is episodically released. In aged persons the secretion is diminished ("somatic break"). Indirect signs of reduced endogenous growth hormone secretion is the decrease of IGF 1 and IGFBP 3 concentration (stable parameters).

The secretion of STH is **pulsatile** (significant nycthemeral rhythm). In contrast the levels of the Insulin like growth factor 1 (IGF1 - synonym Somatomedin C shows no rhythm and also is postprandial stabil. Therefore the assessment of **IGF 1** is more valid than the investigation of STH.

Preanalytics - send frozen
- avoid stress
- blood withdrawal 8.00 h in the morning, fastening
- stop therapy 3-4 days before blood withdrawal to avoid STH increase: levodopa, insulin, beta blocker (propranolol) or estrogens. Phenothiazins (e.g. chlorpromazine) decrease STH level.

Material: 1 ml serum, **Frozen**

TAT: 5-7 days*

Method: LIA

Units: ng/ml

Ref.- range: see report

Note: Please note that **IGF1** and **IGFBP3** are more accurate and stable parameters in the detection of growth abnormalities.

If the patient is taking multivitamins or dietary supplements containing high dose of Biotin (> 5 mg), the patient should stop taking it for at least 24 hours, before having the blood collection.

For complete list of laboratory test offered at Freiburg Medical Laboratory, please visit <http://www.fml-dubai.com/parameter-listings/>