

**GROWTH DISORDER
PANEL, SERUM
(CLIA)**

Growth Hormone	ng/mL
IGFBP-3	ug/mL
IGF-1	ng/mL

- Note:** 1. Due to episodic nature of Growth hormone secretion it is recommended to perform GH dynamic studies for a definite diagnosis
2. Major stress, fasting, malnutrition & high protein meals stimulate GH secretion

Comments

Growth hormone (GH) is known to have direct action on long bone growth in children, but majority of its anabolic and metabolic actions are mediated through intermediary factors like IGFBP-3 & IGF-1. GH deficiency is mostly idiopathic in children whereas Pituitary adenoma is the commonest cause in adults.

Both GH and IGF-1 decline with age. IGF-1 is diagnostically more useful in patients younger than 40 years. IGF-1 levels are useful in diagnosing patients with active Acromegaly with low basal GH levels & in suspected cases of Acromegaly who show suppression of GH to normal after glucose administration. GH is secreted in a pulsatile fashion, hence a low or undetectable level in a child with decreased growth velocity does not necessarily indicate GH deficiency.

IGFBP-3 is used in the differential diagnosis of GH deficiency and Non-GH deficient short children. It is also used to assess nutritional status.