



IGF-1, LC/MS

Test ID: FIGF1

Explanation:

Effective May 8, 2026, Test ID FIGF1, referred to Quest Diagnostics SJC, will be obsolete due to availability of Mayo tests IGF1S and IGFPN.

Recommended Alternative Tests:

Insulin-Like Growth Factor 1, Serum

Test ID: IGF1S

Methodology:

Chemiluminescence Immunoassay

Reference Values:

Male:

<1 year: 27.0-157.0 ng/mL

1 year: 29.7-166.8 ng/mL

2 years: 33.9-183.9 ng/mL

3 years: 39.0-204.5 ng/mL

4 years: 44.3-225.0 ng/mL

5 years: 50.0-245.5 ng/mL

6 years: 56.2-267.1 ng/mL

7 years: 63.4-291.9 ng/mL

8 years: 72.4-323.1 ng/mL

9 years: 83.6-361.6 ng/mL

10 years: 96.9-406.6 ng/mL

11 years: 111.6-454.4 ng/mL

12 years: 126.1-498.7 ng/mL

13 years: 138.6-532.5 ng/mL

14 years: 147.5-551.2 ng/mL

15 years: 152.2-553.5 ng/mL

16 years: 152.9-541.8 ng/mL

17 years: 150.6-520.6 ng/mL

18 years: 146.2-493.6 ng/mL

19 years: 140.2-462.7 ng/mL
20 years: 133.1-430.0 ng/mL
21-25 years: 115.2-354.8 ng/mL
26-30 years: 97.9-281.6 ng/mL
31-35 years: 88.3-246.0 ng/mL
36-40 years: 83.4-232.7 ng/mL
41-45 years: 74.9-216.4 ng/mL
46-50 years: 66.9-205.1 ng/mL
51-55 years: 60.6-200.3 ng/mL
56-60 years: 54.3-194.2 ng/mL
61-65 years: 48.8-187.7 ng/mL
66-70 years: 46.5-191.9 ng/mL
71-75 years: 40.9-179.2 ng/mL
76-80 years: 37.1-172.0 ng/mL
81-85 years: 33.8-165.4 ng/mL
86-90 years: 32.2-166.1 ng/mL

Females:

<1 year: 17.9-125.6 ng/mL
1 year: 19.5-132.3 ng/mL
2 years: 22.2-145.4 ng/mL
3 years: 25.9-164.2 ng/mL
4 years: 30.7-187.8 ng/mL
5 years: 36.2-214.4 ng/mL
6 years: 42.0-240.4 ng/mL
7 years: 48.6-269.6 ng/mL
8 years: 56.9-305.3 ng/mL
9 years: 67.2-349.4 ng/mL
10 years: 79.5-400.3 ng/mL
11 years: 92.6-452.6 ng/mL
12 years: 105.3-499.1 ng/mL
13 years: 115.9-533.4 ng/mL
14 years: 123.4-552.0 ng/mL
15 years: 127.4-554.2 ng/mL
16 years: 127.9-541.5 ng/mL
17 years: 125.3-517.3 ng/mL
18 years: 120.5-485.8 ng/mL
19 years: 114.4-450.8 ng/mL
20 years: 107.8-416.0 ng/mL
21-25 years: 92.9-342.0 ng/mL
26-30 years: 78.4-270.0 ng/mL
31-35 years: 73.1-243.0 ng/mL
36-40 years: 69.0-227.0 ng/mL
41-45 years: 61.5-204.4 ng/mL
46-50 years: 56.8-194.5 ng/mL
51-55 years: 53.0-189.6 ng/mL
56-60 years: 45.6-172.4 ng/mL
61-65 years: 42.2-169.0 ng/mL

66-70 years: 38.3-162.5 ng/mL
71-75 years: 36.6-164.7 ng/mL
76-80 years: 34.7-164.8 ng/mL
81-85 years: 34.4-172.4 ng/mL
86-90 years: 33.6-177.8 ng/mL

Tanner stage reference intervals:

Males:

I: 81.3-255.3 ng/mL
II: 106.2-432.3 ng/mL
III: 244.9-511.4 ng/mL
IV: 222.6-577.7 ng/mL
V: 227.4-517.8 ng/mL

Females:

I: 85.9-323.0 ng/mL
II: 117.5-451.3 ng/mL
III: 258.3-528.5 ng/mL
IV: 224.2-585.8 ng/mL
V: 188.2-511.6 ng/mL

Tanner Stage reference source: Bindlingmaier M, Friedrich N, Emeny RT, et al. Reference intervals for insulin-like growth factor-1 (IGF-1) from birth to senescence: results from a multicenter study using a new automated chemiluminescence IGF-I immunoassay conforming to recent international recommendations. J Clin Endocrinol Metab. 2014;99(5):1712-1721

Note: Puberty onset (transition from Tanner stage I to Tanner stage II) occurs for boys at a median age of 11.5 (+/-2) years and for girls at a median age of 10.5 (+/-2) years. There is evidence that it may occur up to 1 year earlier in obese girls and in African American girls. For boys, there is no definite proven relationship between puberty onset and body weight or ethnic origin. Progression through Tanner stages is variable. Tanner stage V (young adult) should be reached by age 18.

Specimen Requirements:

Patient Preparation: For 12 hours before specimen collection, patient **should not** take multivitamins or dietary supplements (eg, hair, skin, and nail supplements) containing biotin (vitamin B7).

Supplies: Sarstedt Aliquot Tube, 5 mL (T914)

Collection Container/Tube:

Preferred: Red top

Acceptable: Serum gel

Submission Container/Tube: Plastic vial

Specimen Volume: 0.8 mL Serum

Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume

Serum: 0.5 mL

Specimen Stability Information:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	90 days
	Ambient	7 days
	Refrigerated	7 days

CPT Code:

84305

Day(s) Setup: Monday through Friday

Report Available: 1 to 3 days

Insulin-Like Growth Factor 1 and Insulin-Like Growth Factor Binding Protein 3 Growth Panel, Serum

Test ID: IGFPN

Methodology:

IGF1S: Chemiluminescence

IGFB3: Enzyme-Labeled Chemiluminescent Immunometric Assay

Reference Values:

INSULIN-LIKE GROWTH FACTOR 1

Male:

<1 year: 27.0-157.0 ng/mL

1 year: 29.7-166.8 ng/mL

2 years: 33.9-183.9 ng/mL

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Note: Puberty onset (transition from Tanner stage I to Tanner stage II) occurs for boys at a median age of 11.5 (+/-2) years and for girls at a median age of 10.5 (+/-2) years. There is evidence that it may occur up to 1 year earlier in obese girls and in African American girls. For boys, there is no definite proven relationship between puberty onset and body weight or ethnic origin. Progression through Tanner stages is variable. Tanner stage V (young adult) should be reached by age 18.

INSULIN-LIKE GROWTH FACTOR BINDING PROTEIN 3

1-7 days: < or =0.7 mcg/mL
8-14 days: 0.5-1.4 mcg/mL
15 days-11 months: Unavailable
1 year: 0.7-3.6 mcg/mL
2 years: 0.8-3.9 mcg/mL
3 years: 0.9-4.3 mcg/mL
4 years: 1.0-4.7 mcg/mL
5 years: 1.1-5.2 mcg/mL
6 years: 1.3-5.6 mcg/mL
7 years: 1.4-6.1 mcg/mL
8 years: 1.6-6.5 mcg/mL
9 years: 1.8-7.1 mcg/mL
10 years: 2.1-7.7 mcg/mL
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12 years: 2.7-8.9 mcg/mL
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71-75 years: 2.8-5.7 mcg/mL
76-80 years: 2.5-5.1 mcg/mL
81-85 years: 2.2-4.5 mcg/mL

Tanner Stages:

Males

Stage I: 1.4-5.2 mcg/mL
Stage II: 2.3-6.3 mcg/mL
Stage III: 3.1-8.9 mcg/mL
Stage IV: 3.7-8.7 mcg/mL
Stage V: 2.6-8.6 mcg/mL

Females

Stage I: 1.2-6.4 mcg/mL
Stage II: 2.8-6.9 mcg/mL
Stage III: 3.9-9.4 mcg/mL
Stage IV: 3.3-8.1 mcg/mL
Stage V: 2.7-9.1 mcg/mL

Note: Puberty onset (transition from Tanner stage I to Tanner stage II) occurs for boys at a median age of 11.5 (+/-2) years and for girls at a median age of 10.5 (+/-2) years. There is evidence that it may occur up to 1 year earlier in obese girls and in African American girls. By contrast, for boys there is no definite proven relationship between puberty onset and body weight or ethnic origin. Progression through Tanner stages is variable. Tanner stage V (young adult) should be reached by age 18.

Specimen Requirements:

Patient Preparation: For 12 hours before specimen collection, patient **should not** take multivitamins or dietary supplements (eg, hair, skin, and nail supplements) containing biotin (vitamin B7).

Collection Container/Tube:

Preferred: Red top

Acceptable: Serum gel

Submission Container/Tube: 2 Plastic vials

Specimen Volume: 1.6 mL Serum

Collection Instructions: Centrifuge and aliquot serum into 2 plastic vials, each containing 0.8 mL of serum.

Specimen Minimum Volume

Serum: 0.5 mL

Specimen Stability Information:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	14 days
	Ambient	72 hours
	Refrigerated	72 hours

CPT Code:

83520, 84305

Day(s) Setup: Monday through Friday

Report Available: 1 to 3 days

Questions

Contact MCS Referrals Supervisors Amy Bluhm or Heather Hilgart at 800-533-1710.