

1,25 Dihydroxycholecalciferol (Vitamin D)

Synonyms

1,25 DHCC

Clinical Indication

1,25-dihydroxycholecalciferol (1,25-D), the active metabolite of vitamin D is formed in the kidney from 25-hydroxycholecalciferol (25-D). 1,25-D may also be produced by other cells in some pathological conditions (sarcoidosis, tumours).

Investigation of inherited rickets/vitamin D dependent rickets. 1-25-D may also be useful to confirm hypercalcaemia due to sarcoidosis and in the investigation of oncogenic osteomalacia.

Part of Profile / See Also

Request Form

Combined Pathology manual blood request form or ICE request

Availability / Frequency of Analysis

Referred test: Analysed by Clinical Biochemistry, Norfolk & Norwich hospital (10294), if specific criteria met.

Turnaround Time

Patient Preparation

A fasting sample is preferred but not essential. No further dietary or drug restrictions are required.

Sample Requirements

Specimen Type

Serum (or plasma for paediatric samples)

Volume

2 ml

Container



Yellow top (SST) tube



Or Paediatric green top (lithium-heparin)



Or Paediatric orange top (lithium heparin)

Please contact laboratory before collection. Samples should be transported to the laboratory immediately.

Reference Range & Units

Adults: 55 - 139 pmol/L.
 Levels may be up to 20% higher in children due to the effects of growth hormone.
 0 - <1 yr: 77 – 471 pmol/L
 1 - <3 yr: 113 – 363 pmol/L
 3 - <19 yr: 108 – 246 pmol/L

Interferences

Interpretation & Clinical

Decision Value (if applicable)

In type 1 (deficient 1 alpha-hydroxylase) inherited rickets 1,25-D is low and in type 2 (end-organ resistance) 1,25-D may be high. 1,25-D may also be elevated in hereditary hypophosphataemic rickets with hypercalcuria. 25-D is

usually normal in all three.

References

Test code

125D

Lab Handling

Separate into 2 aliquots immediately (within 1 hour of collection) and freeze at -20°C. Send sample to the referral laboratory frozen. Include calcium, albumin, phosphate, alkaline phosphatase and creatinine levels on referral request form.



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