

Dihydrotestosterone

Description	<p>Dihydrotestosterone (DHT) is responsible for external virilisation of males during embryological development.</p> <p>5-alpha-reductase (5αR) converts testosterone into DHT. 5αR deficiency is characterised prior to puberty by a female phenotype or ambiguous genitalia in 46 XY karyotype and post pubertal virilisation.</p>
Indication	To investigate suspicion of 5αR deficiency and differentiate from very rare conditions such as partial androgen insensitivity syndrome and 17β-hydroxysteroid dehydrogenase type 3 deficiency.
Additional Info	5αR deficiency can be diagnosed after puberty in the majority of cases by measurement of Testosterone (T) and DHT. Before puberty, stimulation of androgen production with human chorionic gonadotrophin (hCG) is usually required to achieve androgen concentrations which can be measured with the precision necessary for accurate diagnosis. Circulating concentrations are of little diagnostic utility in females.
Concurrent Tests	Testosterone; HCG stimulation test.
Dietary Requirements	N/A
Interpretation	<p>Reference range (nmol/L):</p> <p>Male 0.9-2.9</p> <p>Female 0.2-1.0</p> <p>The ratio T/DHT shows a greater increase post hCG stimulation compared to baseline in 5αR deficiency.</p>
Collection Conditions	N/A
Frequency of testing	N/A