



SHBG

Synonyms

Sex Hormone Binding Globulin

Clinical Indication

SHBG is the major serum testosterone binding protein and binds over 70% of testosterone. SHBG levels are suppressed by increased androgen levels and elevated by increased oestrogen (e.g. during pregnancy or treatment with some oral contraceptives). The primary reason for measurement of SHBG is to calculate free androgen status from total testosterone levels and is useful if total testosterone levels are borderline. SHBG levels are not helpful in discriminating between groups of patients with suspected androgen excess.

SHBG levels are elevated in thyrotoxicosis and decreased in hypothyroidism and SHBG may be used as a marker of thyroid status in patients with thyroid hormone resistance.

Female total testosterone greater than 1.5 nmol/L or borderline/low male testosterone. Assessment of thyroid status in thyroid hormone resistance. Otherwise if requested by Consultant Endocrinologist or agreed with Consultant Biochemist.

Part of Profile / See Also

Request Form

Combined Pathology manual Blood form or ICE request

Availability / Frequency of Analysis

On request

Turnaround Time

Same day (weekdays only)

Patient Preparation

None required.

Sample Requirements

Specimen Type

Serum or plasma

Volume

2 mL

Container



Gold-top (SST) tube

Or



Green-top (lithium heparin) tube

Plain serum samples may also be used

Reference Range & Units

Patient group	SHBG (nmol/L)	Source
Male: < 30 days	12 – 116	Caliper study
Male: 1 – 12 months	>32	
Male: 1 – 7 years	53 - 174	
Male: 7 – 10 years	45 – 144	
Male: 10 – 12 years	16 – 132	
Male: >12 years	13 - 90	
Female: < 30 days	12 – 116	Caliper study
Female: 1 – 12 months	>32	
Female: 1 – 7 years	53 - 174	
Female: 7 – 10 years	45 – 144	
Female: 10 – 12 years	16 – 132	
Female: 12 - 46 years	18 – 136	
Female: >46 years	17 - 125	
If total testosterone is measured a free androgen index (FAI) will be calculated and reported.		
Patient group	Free Androgen Index (nmol/L)	
Male: > 17 years	24 – 110	
Female: 16 – 46 years	< 11	
Female: >46 years	< 7	

Reference: Beckman kit insert

Interferences
Interpretation & Clinical
Decision Value (if applicable)
References
Test code

SHBG

Lab Handling

Analysed from primary tube and stored at 4°C.