

Prostate specific antigen, PSA

General:

The prostate specific antigen is a glycoprotein and a tissue specific secretion product of the prostate gland cells, similarly as prostate specific acidic phosphatase (PSP). It is used as an organ specific tumor marker. The concentration in the prostate gland secretion is 1 million times higher than in plasma, its half-life is 2.2 days. In healthy men PSA supports the liquefaction of the seminal plasma. Under cell stress (manipulation, inflammation, necrosis, tumor) PSA penetrates through the basal cell membrane and enters into the blood stream (increased values).

The following tests are available:

- **Prostate specific antigen, PSA**

Indication: Screening of prostate gland carcinoma, course monitoring after prostate gland resection, radiotherapy, monitoring of hormonal therapy of the prostate gland carcinoma, prostatitis

Material: 1 ml serum

Stability: 5 days at 2 to 8°C

TAT: same day, FML

Method: ECL

Units: ng/ml

Ref.-range: <4.00

Note: In routine diagnostics a PSA value of 10 ng/ml is considered to be the approximate limiting value for the differentiation between benign prostatic hyperplasia (BPH) and prostate gland carcinoma. See also Tumor marker. The combination of complexed (CPSA) or free PSA offers a better differential diagnosis in the range under 10 ng/ml.

If the patient is taking multivitamins or dietary supplements containing high dose of Biotin (> 5 mg), the patient should stop taking it for at least 24 hours, before having the blood collection

Comments: **Increased:** prostatitis, infarction of the prostate gland, compression of the prostate gland (digital examination, catheterization of the bladder, cystoscopy, obstruction of the bladder exit), benign prostatic hyperplasia (BPH), prostate gland carcinoma (at present PSA is the most sensitive parameter), metastasis after removal of the primary tumor.

Other: other malignant disorders (values rarely over 10 ng/ml): gastrointestinal and hypernephroid carcinomata, leucosis, hepatic cellular carcinoma.

- **Prostate specific free antigen, free PSA**

General:

The part of free PSA in relation to total PSA is considerably lower in patients with prostate gland carcinoma than in benign prostate hyperplasia.

Indication: Differential diagnosis benign/malignant prostate gland disorders

Material: 1 ml serum

Stability: 5 days at 2 to 8°C

TAT: same day, FML

Method: ECL

Units: ng/ml

Ref. range: see report

Note: If the patient is taking multivitamins or dietary supplements containing high dose of Biotin (> 5 mg), the patient should stop taking it for at least 24 hours , before having the blood collection.

- **Prostate specific antigen, complexed, cPSA**

General:

In the PSA borderline range (between 4 and 10 ng/ml) it is sometimes difficult to differentiate correctly between prostate gland carcinoma and benign prostatic hyperplasia. Determination of PSA-isoforms can improve this situation. Free PSA (fPSA) or the ratio (fPSA/tPSA) is an additional decision criterion for a prostate gland biopsy. Complexed PSA has been described as a superior parameter compared to the ratio fPSA/tPSA.

Indication: Differential diagnosis benign/malignant prostate gland disorders

TAT: 7-10 days*

Method: CLIA

Units: ng/ml

Ref. range: < 3.2

For complete list of laboratory test offered at Freiburg Medical Laboratory, please visit

<http://www.fml-dubai.com/parameter-listings/>