

# Placental alkaline phosphatase

The following tests are available:

- **Alkaline phosphatase in serum**

General:

AP is a membrane-bound cell enzyme. Large enzyme quantities are found in the skeletal system, liver parenchyma and bile epithelium. Activity increases of the total AP in serum point to disorders in liver, bile ducts or bones. Further genetically determined isoenzyme groups can be distinguished: bone (as enzymatic marker of the osteoblastic activity) and liver/gall/intestine AP.

Material: 1 ml serum

Stability: 7 days at 2 to 8°C

TAT: same day, FML

Method: photometric

Units: U/l

Ref.-range: see report

Note: Interference: icteric serum, citrate, EDTA and oxalate, anticoagulants (decreased), hemolysis (increased).

- **Alkaline phosphatase, isoenzymes**

General:

Intestinal AP, the group of liver-bone-kidney AP, and placental AP belong to the isoenzymes of the alkaline phosphatase (AP). Characteristic AP isoenzymes are predominant in the mentioned organs. Liver AP: Damage done to the liver parenchyma, tumors, metastases. / Bile duct AP: hepatobiliary disorders, cholestasis, primary liver cell carcinoma. / Small intestine AP: hepatic cirrhosis, diabetes mellitus, chronic kidney insufficiency / Bone AP: increased by active osteoblasts during bone formation.

Material: 1 ml serum

TAT: 5-7 days\*

Method: GEL electrophoresis

Ref. range: see report

- **Alkaline phosphatase, placental (PLAP)**

**General:**

The placental alkaline phosphatase is an enzyme located on the membrane and is usually synthesized by syncytiotrophoblasts. In the maternal circulation it is usually detectable after the 12th week of pregnancy. With significant sensitivity PLAP is detectable in ovarian carcinoma and testicular tumors predominantly in seminoma. The incidence of the serum-PLAP in seminoma amounts to between 50% and 90%, in non-seminoma germ-cell-tumors to between 20% and 36%. A monumental disadvantage is that a significant PLAP-elevation – up to ten-fold of the upper limit of the reference range – is found in smokers. This eliminates the usability of PLAP as a tumor marker among this population. However, in marker-positive non-smoking patients, the PLAP is an excellent marker for therapy and relapse monitoring. The half-life period of the tumor-marker is <3 days.

**Indication:** Affirmation, progress monitoring and therapy-control in seminoma and other testicular germ-cell-tumors, ovarian cancer. Also detected in other tumors (lung, stomach). The alkaline placental phosphatase is detectable in the maternal serum from the 3. trimester onwards.

**Material:** 1 ml serum, **frozen**

**TAT:** 5-7 days\*

**Method:** EIA

**Units:** mu/L

**Ref.- range:** see report

For complete list of laboratory test offered at Freiburg Medical Laboratory, please visit <http://www.fml-dubai.com/parameter-listings/>