

### Cancer Biomarkers ELISA kits

Interchim provides kits for Research on several cancer biomarkers.

Following ELISA kits include :

- ◆ Precoated, ready to use 96-well strip plate for uses over 12-18 months
- ◆ No sample dilution/processing allows rapid analysis.
- ◆ Provided with convenient liquid Standards
- ◆ Time saving ready-to-use substrate solution and other assay components.
- ◆ High sensitivity, excellent precision (diluted samples).

See also TumorTACS™ Kit #Q9480 in section E28/Apoptosis  
See also Ab Research Area #5 (Cancer, Hypoxia pA.5)

These kits are for in vitro research use only, not for diagnostic. A research Use Notification Form must be signed. They are for human research, but in some cases may be also useful for animals (rat, mouse,...). Beside support to diagnostic, applications include monitoring of a cancer or other diseases development or treatment.

Tumor marker name	Sample Size	Assay range (sensitivity-max)	Assay time	Cat #	Qty.
Alpha Fetoprotein (AFP)	25 µl	10-200 IU/ml	70 min	BP8350	96 tests
CA125 (Ovarian Cancer)	25 µl	5-500 U/ml	210 min	BQ1510	96 tests
CA153 (Mucin Breast Cancer)	10 µl	3-200 U/ml	210 min	BQ1520	96 tests
CA199 (Pancreatic and GI Cancer)	25 µl	3-200 U/ml	210 min	BQ1530	96 tests
CA242 (Pancreatic Colorectal cancer)	25 µl	1-200 U/ml	210 min	BQ1540	96 tests
Prostate Specific Antigen (PSA)	25 µl	0.3-60 ng/ml	(40 min)	BQ1550	96 tests
PSA, Free	50 µl	0.1-15 ng/ml	(150 min)	BQ1560	96 tests
Prostatic Acid Phosphatase (PAP)	25 µl	0.3-30 ng/L	(40 min)	BQ1570	96 tests
Neuron Specific Enolase (NSE)	25 µl	1-200 µg/L	(150 min)	BQ1580	96 tests

#### CA125 (Ovarian Cancer)

Ovarian cancer Antigen (CA125) is found in the most serious, endometrioid and clear cell carcinomas of ovary. Epithelial ovarian cancer (EOC) is the most common cause of death from gynecologic malignancy.

As EOC Antigen is not ovarian carcinoma specific, the kit can also be detected in the cancer of fallopian tube, endometrium, endocervix, pancreas, liver, as well as lung.

#### Technical tip

**Alpha FetoProtein (AFP)** (glycoprotein of 65-70 Kda) is widely accepted as tumor marker and for monitoring the therapeutic effectiveness of hepatocellular cancer and nonseminomatous testicular cancer. During fetal development, AFP maintains high levels in the serum and drops to very low levels throughout the remainder of life but is elevated in the malignant diseases of hepatocellular, testicular nonseminomatous origin, and occasionally of other entodermal origin. As such AFP measure in serum and amniotic fluid help to support standard diagnostic.

**Ovarian cancer Antigen (CA125)** is a high molecular weight (>200kDa) mucin-like glycoprotein and is expressed by greater than 80% of non-mucinous Epithelial Ovarian carcinomas (EOC). As such, it is used as a prognostic marker for EOC cancer, that is the most common cause of death from gynecologic malignancy. Its measurement is also useful in the cancer of fallopian tube, endometrium, endocervix, pancreas, liver, as well as lung. Finally CA125 EOC is found in the most serious, endometrioid and clear cell carcinomas of ovary.

The **MBC antigen** (also known as CA153) is a membrane anchored mucin type glycoprotein present in a variety of adenocarcinomas including breast, colon, ovary, lung and pancreas, and normal epithelial cells of different organs. The mucin (MBC) is secreted from tumor cells and can be used as serological marker of breast cancer, for which it is a more sensitive and specific marker than the previously used carcinoembryonic antigen (CEA).

**Pancreatic and Gastro-Intestinal Cancer marker (PC-199)** measures a carbohydrate antigenic determinant expressed on a high molecular weight mucin, also related to the Lewis blood group substances. This mucin type of glycoprotein is found in the area of pancreatic and colon and hepatocellular carcinomas, and only in cancer patients belonging to the Le (a+b-) or Le (a-b+) blood group. As such, it is an aid in evaluation of chronic pancreatitis and pancreatic cancer. Also a prognostic indicator as an adjunct to chemotherapy.

**CA242 (Pancreatic Colorectal cancer)** is a useful biomarker for the clinical evaluation of symptomatic patients suspected of having pancreatic cancer, colo-rectal and other related diseases. Reactivity was not found with PSA (120 ng/mL), PAP (60 ng/mL), CEA (18 248 ng/mL), AFP (10 000 ng/mL), CA-125 (1 000/ U/mL), however reactivity with Crude Antigen CA153 exists.

**Enolase gg (NSE)** was initially detected in neurons and neuroendocrine cells, and found a valuable tumor marker of neuroendocrine origin, particularly in small cell lung cancer and in neuroblastoma. Our assay measures C-peptide of the gamma-subunit of enolase, in human serum or other biological fluids.

**Human Prostate-Specific Antigen (PSA)** is a protein expressed only in the prostatic secretory epithelium. This protease with chymotrypsin-like activity liquefy semen through hydrolysis of semenogelin. Excepted in prostatic tissue, prostatic fluid and seminal plasma, PSA is not present in any of the men normal tissue nor is it produced by cancers of the lung, colon, rectum, stomach, breast, pancreas or thyroid. Elevated PSA (>1.5 ng/ml) has been found the hallmark marker for prostate cancer (86%), benign prostatic hypertrophy (61%), or inflammatory adjacent genitourinary tissues, but not in apparently healthy women with cancer. As such, PSA is organ specific, rather than cancer disease specific. PSA occurs also in serum mainly as free PSA (fPSA, MW 30kDa) and PSA bound to  $\alpha$ -1-anti-chymotrypsin (ACT-PSA, MW 90 kDa). The free to the total PSA ratio was the earliest serum marker indicating a subsequent diagnosis of prostatic cancer. Measuring free unbound form of PSA can help physicians decide whether or not a biopsy. Measuring total PSA levels correlate with the stage of disease and response to treatment in patients with prostatic cancer, and helps monitoring patients with prostatic cancer and determining the potential and effectiveness of surgery or other therapies.

**Prostatic acid phosphatase (PAP or ACP)** enzyme was found the best marker for prognosis of progression of prostate cancer, besides PSA (Killina, Yoshiki). Measurement of PAP in human serum (may be optimized for other biological fluids) is helpful in researching the best way to manage patients with PAP malignancies. No interference in the PAP assay was observed from hTSH (up to 25 µIU/ml), human AFP (up to 100 IU/ml), and human CEA (up to 30 ng/ml). See also our Acidic Phosphatases assay #BP2940.

## Immunology custom services

### INNOVATIVE and diversified offer

- ◆ Peptide synthesis (including **long peptides > 100aa**)
- ◆ Innovative protocol for **mouse polyclonal antibody** production (obtain quantity up to 100 times more than with standard protocols)
- ◆ Innovative protocol for immunisation with **carrier-free peptides** (increase chances to **recognize native protein**)
- ◆ **Rabbit polyclonal** antibody production
- ◆ **Mouse monoclonal** antibody development and production

### Versatile offer

- ◆ We offer standard programs but we can make any changes depending on your needs and restraints
- ◆ Each custom service requested is considered

### Reliable offer : high quality control

- ◆ LC-MS peptide analysis
- ◆ ELISA serum monitoring
- ◆ Purification controls : SDS-PAGE (for purity control) and ELISA (for affinity control)
- ◆ Certificate of analysis supplied at the end of each program

### Personalized follow-up

#### A whole package

If needed, we can offer a package from antigen sourcing to antibody purification, labeling or immobilisation.



See page A.403 for more details on our custom programs



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