BECKMAN COULTER

ACCESS
Immunoassay Systems

Instructions For Use

Access BR Monitor
Cancer Antigen 15-3

REF 387620

FOR PROFESSIONAL USE ONLY

Rx Only

ANNUAL REVIEW

Reviewed by	Date	Reviewed by	Date

PRINCIPLE

WARNING

The concentration of CA 15-3 antigen in a given specimen determined with assays from different manufacturers can vary due to differences in assay methods and reagent specificity. The results reported by the laboratory to the physician must include the identity of the CA 15-3 antigen assay used. Values obtained with different assay methods cannot be used interchangeably. If, in the course of monitoring a patient, the assay method used for determining CA 15-3 antigen values is changed, additional sequential testing should be carried out to confirm baseline values.

INTENDED USE

The Access BR Monitor assay is a paramagnetic particle, chemiluminescent immunoassay for the quantitative determination of CA 15-3 antigen levels in human serum and plasma (heparin) using the Access Immunoassay Systems. This device is indicated for use in the measurement of CA 15-3 antigen to aid in the management of breast cancer patients. Serial testing for CA 15-3 antigen concentrations should be used in conjunction with other clinical methods for monitoring breast cancer.

SUMMARY AND EXPLANATION

The CA 15-3 antigen is an epitope on a large mucin-like glycoprotein, which is a product of MUC1.[1,2] Mucins, present in normal glandular epithelia of various organs, serve to protect and lubricate surrounding cells.[1,2,3] In breast cancer, the MUC1 mucin becomes aberrantly glycosylated, overexpressed and released into circulation. Once released into circulation, it may be detected at elevated levels.[1,2,3,4]

CA 15-3 antigen levels are elevated in many patients with epithelial breast carcinoma. Elevated levels of CA 15-3 antigen may also be present in those patients with lung, ovarian, pancreatic, and colorectal cancers, as well as non-malignant conditions including benign breast and liver disease, cirrhosis, and hepatitis.[2,5,6]

In the United States, breast cancer is a leading cause of cancer death in women, second to lung cancer.[7] In the world, breast cancer has become one of the most common cancers affecting 1 in 10 women.[5]

CA 15-3 antigen, has become a widely recognized breast cancer marker[1,2] and has been shown to be more sensitive than CEA in detecting recurrence of breast cancer.[6,8] Increasing CA 15-3 antigen levels may be representative of disease progression, where as, decreasing antigen levels may be associated with disease regression.[8]

The Access BR Monitor assay is not recommended as a screening tool. A value below the cutoff limit does not indicate the absence of breast cancer. Other clinically acceptable tests and procedures should also be considered in the monitoring of breast cancer and good patient management.

METHODOLOGY

The Access BR Monitor assay is a two-site immunoenzymatic (“sandwich”) assay. A sample is added to a reaction vessel along with mouse monoclonal anti-CA 15-3 antigen alkaline phosphatase conjugate and paramagnetic particles coated with a second mouse monoclonal anti-CA 15-3 antigen antibody. The CA 15-3 antigen in the sample binds to the immobilized monoclonal anti-CA 15-3 antigen on the solid phase, while the conjugate antibody reacts with a different antigenic site on the CA 15-3 antigen molecule. After incubation in a reaction vessel, materials bound to the solid phase are held in a magnetic field while unbound materials are washed away. Then, the chemiluminescent substrate is added to the vessel and light generated by the reaction is measured with a luminometer. The light production is directly proportional to the concentration of CA 15-3 antigen in the sample. The amount of analyte in the sample is determined from a stored, multi-point calibration curve.

SPECIMEN

SPECIMEN COLLECTION AND PREPARATION

1. Serum and plasma (heparin) are the recommended samples.
2. Observe the following recommendations for handling, processing, and storing blood samples:[9]
   - Collect all blood samples observing routine precautions for venipuncture.
   - Allow serum samples to clot completely before centrifugation.
   - Keep tubes stoppered at all times.
   - Physically separate serum or plasma from contact with cells as soon as possible.
   - Store samples tightly stoppered at room temperature (15 to 30°C) for no longer than eight hours.
   - If the assay will not be completed within eight hours, refrigerate the samples at 2 to 8°C.
   - If the assay will not be completed within 48 hours, or for shipment of samples, freeze at -20°C or colder.
   - Thaw samples only once.
3. Use the following guidelines when preparing specimens:
   - Ensure residual fibrin and cellular matter has been removed prior to analysis.
   - Follow blood collection tube manufacturer's recommendations for centrifugation.
4. Each laboratory should determine the acceptability of its own blood collection tubes and serum separation products. Variations in these products may exist between manufacturers and, at times, from lot-to-lot.
5. Avoid assaying lipemic and/or hemolyzed samples.

REAGENTS

PRODUCT INFORMATION

Access BR Monitor Reagent Pack

Cat. No. 387620: 100 determinations, 2 packs, 50 tests/pack

- Provided ready to use.
- Store upright and refrigerate at 2 to 10°C.
- Refrigerate at 2 to 10°C for a minimum of two hours before use on the instrument.
- Stable until the expiration date stated on the label when stored at 2 to 10°C.
- Stable at 2 to 10°C for 56 days after initial use.
- Signs of possible deterioration are a broken elastomeric layer on the pack or control values out of range.
- If the reagent pack is damaged (i.e., broken elastomer), discard the pack.
- All antisera are polyclonal unless otherwise indicated.

R1a:	Paramagnetic particles, coated with goat anti-biotin antibodies, biotinylated anti-CA 15-3 antigen mouse monoclonal antibodies, bovine serum albumin, < 0.1% sodium azide and 0.1% ProClin* 300.
R1b:	Mouse monoclonal anti-CA 15-3 antigen-alkaline phosphatase (bovine) conjugate, bovine serum albumin, < 0.1% sodium azide, 0.25% ProClin 300.
R1c:	Buffered protein solution (bovine, goat, mouse), < 0.1% sodium azide, 0.1% ProClin 300.

*ProClin™ is a trademark of The Dow Chemical Company (“Dow”) or an affiliated company of Dow.

WARNING AND PRECAUTIONS

- For *in vitro* diagnostic use.
- Patient samples and blood-derived products may be routinely processed with minimum risk using the procedure described. However, handle these products as potentially infectious according to universal precautions and good clinical laboratory practices, regardless of their origin, treatment, or prior certification. Use an appropriate disinfectant for decontamination. Store and dispose of these materials and their containers in accordance with local regulations and guidelines.
- Human source material used in the preparation of the reagent has been tested and found negative or non-reactive for Hepatitis B, Hepatitis C (HCV), and Human Immunodeficiency Virus (HIV-1 and HIV-2). Because no known test method can offer complete assurance that infectious agents are absent, handle reagents and patient samples as if capable of transmitting infectious disease.[10]
- For hazards presented by the product refer to the following sections: REACTIVE INGREDIENTS and GHS HAZARD CLASSIFICATION.

REACTIVE INGREDIENTS

⚠ CAUTION

Sodium azide preservative may form explosive compounds in metal drain lines. See NIOSH Bulletin: Explosive Azide Hazard (8/16/76).
To avoid the possible build-up of azide compounds, flush wastepipes with water after the disposal of undiluted reagent. Sodium azide disposal must be in accordance with appropriate local regulations.

GHS HAZARD CLASSIFICATION

PMP (Compartment R1a)	WARNING	
		
	H317	May cause an allergic skin reaction.
	P280	Wear protective gloves, protective clothing and eye/face protection.
	P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
	P362+P364	Take off contaminated clothing and wash it before use.
		reaction mass of: 5-chloro-2-methyl-4-isothiazolin -3-one [EC# 247-500-7] and 2-methyl-4-isothiazolin-3-one [EC# 220-239-6](3:1) < 0.05%
Conjugate (Compartment R1b)	WARNING	
		
	H317	May cause an allergic skin reaction.
	P280	Wear protective gloves, protective clothing and eye/face protection.
	P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
	P362+P364	Take off contaminated clothing and wash it before use.
		reaction mass of: 5-chloro-2-methyl-4-isothiazolin -3-one [EC# 247-500-7] and 2-methyl-4-isothiazolin-3-one [EC# 220-239-6](3:1) < 0.05%
Blocking Reagent (Compartment R1c)	WARNING	
		
	H317	May cause an allergic skin reaction.
	P280	Wear protective gloves, protective clothing and eye/face protection.
	P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
	P362+P364	Take off contaminated clothing and wash it before use.
		reaction mass of: 5-chloro-2-methyl-4-isothiazolin -3-one [EC# 247-500-7] and 2-methyl-4-isothiazolin-3-one [EC# 220-239-6](3:1) < 0.05%

SDS	Safety Data Sheet is available at techdocs.beckmancoulter.com

MATERIALS NEEDED BUT NOT SUPPLIED WITH REAGENT KIT

1. Access BR Monitor Calibrators
   Provided at zero and approximately 10, 50, 100, 500 and 1,000 U/mL.
   Cat. No. 387647
2. Quality Control (QC) materials: commercial control material
3. Access Sample Diluent A
   Vial Cat. No. 81908
   Diluent Pack Cat. No. A79783 (For use with the UniCel DxI system onboard dilution feature.)
4. Access Substrate
   Cat. No. 81906
5. Access Wash Buffer II, Cat. No. A16792
   UniCel DxI Wash Buffer II, Cat. No. A16793

EQUIPMENT AND MATERIALS

R1	Access BR Monitor Reagent Packs

CALIBRATION

CALIBRATION INFORMATION

An active calibration curve is required for all tests. For the Access BR Monitor assay, calibration is required every 56 days. Refer to the appropriate system manuals and/or Help system for information on calibration theory, configuring calibrators, calibrator test request entry, and reviewing calibration data.

QUALITY CONTROL

Quality control materials simulate the characteristics of patient samples and are essential for monitoring the system performance of immunochemical assays. Because samples can be processed at any time in a “random access” format rather than a “batch” format, quality control materials should be included in each 24-hour time period.[11] Include commercially available quality control materials that cover at least two levels of analyte. More frequent use of controls or the use of additional controls is left to the discretion of the user based on good laboratory practices or laboratory accreditation requirements and applicable laws. Follow manufacturer's instructions for reconstitution and storage. Each laboratory should establish mean values and acceptable ranges to assure proper performance. Quality control results that do not fall within acceptable ranges may indicate invalid test results. Examine all test results generated since obtaining the last acceptable quality control test point for this analyte. Refer to the appropriate system manuals and/or Help system for information about reviewing quality control results.

TESTING PROCEDURE(S)

PROCEDURAL COMMENTS

1. Refer to the appropriate system manuals and/or Help system for a specific description of installation, start-up, principles of operation, system performance characteristics, operating instructions, calibration procedures, operational limitations and precautions, hazards, maintenance, and troubleshooting.
2. Mix contents of new (unpunctured) reagent packs by gently inverting pack several times before loading on the instrument. Do not invert open (punctured) packs.

3. Use ten (10) µL of sample for each determination in addition to the sample container and system dead volumes. Use fifty (50) µL of sample in addition to the sample container and system dead volumes for each determination run with the DxI system onboard dilution feature. Refer to the appropriate system manuals and/or Help system for the minimum sample volume required.
4. The system default unit of measure for sample results is U/mL.

PROCEDURE

Refer to the appropriate system manuals and/or Help system for information on managing samples, configuring tests, requesting tests, and reviewing test results.

RESULTS INTERPRETATION

Patient test results are determined automatically by the system software using a weighted four parameter logistic curve (4PLC). The amount of analyte in the sample is determined from the measured light production by means of the stored calibration data. Patient test results can be reviewed using the appropriate screen. Refer to the appropriate system manuals and/or Help system for complete instructions on reviewing sample results.

REPORTING RESULTS

EXPECTED RESULTS

1. Each laboratory should establish its own reference ranges to assure proper representation of specific populations.
2. The distribution of Access BR Monitor results, presented below was determined from a total of 1,244 serum samples from apparently healthy females and females with non-malignant and malignant conditions. Results from 43 apparently healthy males and 51 males with prostate cancer are included in the table.

Subject Category	Number of Subjects	0-23.5 U/mL	23.6-60 U/mL	60.1–120 U/mL	> 120 U/mL
Apparently Healthy					
Females < 50 years	152	150	2	0	0
Females ≥ 50 years	152	141	11	0	0
Males	43	39	4	0	0
Malignant Conditions					
Breast Cancer					
— Stage I	48	44	4	0	0
— Stage II	78	69	9	0	0
— Stage III	38	24	9	3	2
— Stage IV	40	13	13	4	10
Cervical	24	22	1	0	1
Colon	18	16	2	0	0
Esophageal	9	8	1	0	0
Endometrial	6	6	0	0	0
Fallopian Tube	3	2	0	0	1
Gastric/Stomach	43	40	3	0	0

Subject Category	Number of Subjects	0-23.5 U/mL	23.6-60 U/mL	60.1–120 U/mL	> 120 U/mL
Liver	55	44	8	1	2
Lung	29	19	9	0	1
Pancreatic	14	11	1	1	1
Prostate (males)	51	38	12	1	0
Ovarian	51	34	12	5	0
Vaginal/Vulva	11	8	3	0	0
Uterine	18	13	4	0	1
Non-Malignant Conditions					
Breast	79	71	8	0	0
Colon	43	41	2	0	0
Cystitis	26	20	6	0	0
Gastric/Stomach	37	31	3	3	0
Kidney/Renal Failure	49	42	7	0	0
Liver	45	41	4	0	0
Lung	40	38	2	0	0
Ovarian	25	23	2	0	0
Pelvic Inflammatory Disease	23	19	4	0	0
Pregnancy	67	65	2	0	0
Uterine Fibroids	21	20	1	0	0

CLINICAL PERFORMANCE EVALUATION

Serial samples from monitored subjects with known disease status (total of 140 samples) were obtained from 36 females (ages ranging from 36 to 84 years) who were diagnosed with breast cancer (stages II to IV). These subjects were monitored over the course of disease, ranging from 4 months to 41 months follow-up. These subjects may have undergone surgery, hormonal therapy, chemotherapy, and/or radiation therapy during the course of disease management. The method(s) used to determine disease status at sample draw date included: mammography, biopsy, physical exam, x-rays, CAT scan, ultrasound, isotope scan, CA 15-3 measurements, and/or MRI. Disease status is based on one or more clinical diagnostic modalities at the time for each serial blood draw. The determination of disease status was made by the clinician.

Samples from this previously described population of subjects were used for the analyses presented below:

1. Percent positive agreement and percent negative agreement (relative to an automated commercially available CA 15-3 assay);
2. Clinical sensitivity and specificity (based on disease status at time of serial blood draw).

Percent Positive Agreement and Percent Negative Agreement

Percent positive agreement and percent negative agreement were calculated for the Access BR Monitor versus another automated commercially available assay. In this study percent positive agreement and percent negative agreement calculations were based on the 23.5 U/mL upper reference limit (URL, 95th percentile) for the Access BR Monitor

assay and 31.3 U/mL URL for the other commercially available assay. The analyses were based on 140 samples from 36 subjects originally diagnosed with breast cancer (stages II to IV) and at various stages of the disease. Based on the 140 samples from the 36 breast cancer subjects, the percent positive agreement and percent negative agreement were 97.3% and 89.4% respectively. The percent total agreement between the two assays is 93.6%.

Clinical Sensitivity and Clinical Specificity

In this study, clinical sensitivity and clinical specificity were based on the 23.5 U/mL URL, 95th percentile. Clinical sensitivity is calculated based on a total of 44 serum samples from 25 females originally diagnosed with breast cancer (states II to IV) with disease status of "progression" at the time of sample draw date. Clinical specificity is calculated based on a total of 20 samples from 11 females originally diagnosed with breast cancer stages II to IV) with disease status of "No Evidence of Disease" at the time of sample draw date. Based on these two populations, the clinical sensitivity and specificity for the Access BR Monitor assay, based on the 23.5 U/mL URL, were 75% and 75%, respectively. Comparable results, 75% and 85% for clinical sensitivity and clinical specificity, were obtained with another automated commercially available assay.

Monitoring of Patients Diagnosed with Breast Cancer

The Least Significant %Change (LS %Change) represents the minimum magnitude change between two serial CA 15-3 antigen measurements that could not be attributed to assay variation or noise. Based on regression models, a 25% LS %Change was selected to cover the imprecision across the range of Access BR Monitor concentrations. The LS %Change corresponds to 2.5 times the %CV (coefficient of variation) for imprecision, for the Access BR Monitor assay.

The effectiveness of CA 15-3 antigen measurements as an aid in monitoring disease status in patients diagnosed with breast cancer was determined by assessing changes in CA 15-3 antigen levels in serial sets (pairs) with change in disease status. The 36 breast cancer subjects, from the serial monitoring study, were analyzed using one serial set (two sequential visits per set) per subject. In this evaluation, disease status was classified as "Progression" or "No Progression", with "No Progression" consisting of "Stable/No Evidence of Disease (NED)" and "Responding" between two consecutive serial draws. The results from these analyses, on a per patient basis, are presented below.

Table 1.0 %Change in CA 15-3 Antigen Concentrations vs. Clinical Status Based on 25% Least Significant %Change (Per Patient Basis)

Access BR Monitor	Change in Clinical Status		
Change in CA 15-3 Antigen	Progression	No Progression	Total
Significant Change > 25%	14	1	15
No Change ≤ 25%	8	13	21
Total	22	14	36

Access BR Monitor		95% Confidence Interval	
Positive Concordance (Sensitivity)	63.6%	43.0%	80.3%
Negative Concordance (Specificity)	92.9%	68.5%	98.7%
Total Concordance	75.0%	58.9%	86.3%

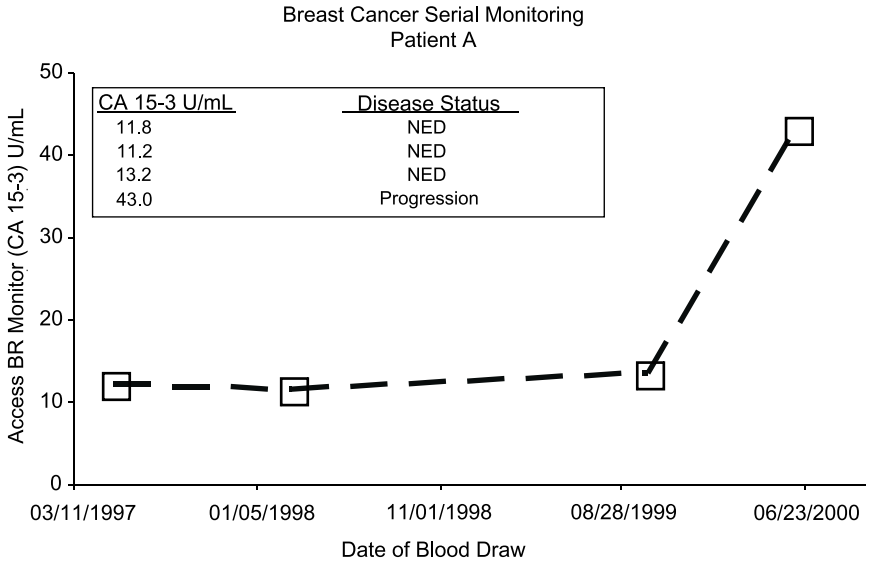
The effectiveness of CA 15-3 antigen measurements to aid in the management of breast cancer patients was also further determined by assessing changes in CA 15-3 antigen levels in serial sets (sequential visit pairs) with changes in disease status. Samples from 36 patients from the serial monitoring study, for a total of 103 serial sets (sequential visit pairs), were further analyzed for %Change in CA 15-3 antigen concentrations across serial sets and disease status. In this evaluation disease status, between consecutive serial draws, was classified as "Progression" or "No Progression", with "No Progression" consisting of "Stable/No Evidence of Disease (NED)" and "Responding". The distribution of results across the two disease classifications relative to the 25% LS %Change, on a per sample basis, are presented below for the Access BR Monitor assay.

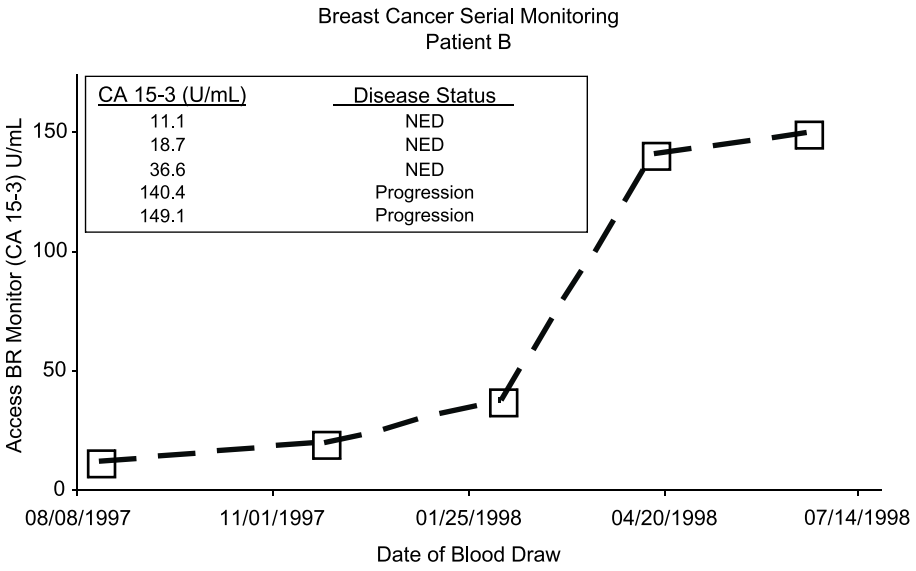
Table 2.0 %Change in CA 15-3 Antigen Concentrations vs. Clinical Status Based on 25% Least Significant %Change (Per Visit Basis)

Access BR Monitor	Change in Clinical Status		
Change in CA 15-3 Antigen	**Progression**	**No Progression**	**Total**
Significant Change > 25%	18	25	43
No Change ≤ 25%	16	44	60
Total	34	69	103

Access BR Monitor		95% Confidence Interval
Positive Concordance (Sensitivity)	52.9%	36.7% to 68.6%
Negative Concordance (Specificity)	63.8%	52.0% to 74.1%
Total Concordance	60.2%	50.5% to 69.1%

Below are two examples showing serial monitoring profiles for the Access BR Monitor CA 15-3 antigen values and the clinical status.





PROCEDURAL NOTES

LIMITATIONS

1. Samples can be accurately measured within the analytic range of the lower limit of detection and the highest calibrator value approximately (0.5-1,000 U/mL).

   - If a sample contains less than the lower limit of detection for the assay, report the results as less than that value (i.e., < 0.5 U/mL). When the DxI system onboard dilution feature is used, the system will report results as less than 850 U/mL.
   - If a sample contains more than the stated value of the highest Access BR Monitor Calibrator (S5), report the result as greater than that value (i.e., > 1,000 U/mL). Alternatively, dilute one volume of sample with nine volumes of Access Sample Diluent A. Refer to the appropriate system manuals and/or Help system for instructions on entering a sample dilution in a test request. The system reports the results adjusted for the dilution.

     The DxI system onboard dilution feature automates the dilution process, using one volume of sample with nine volumes of Access Sample Diluent A, allowing samples to be quantitated up to approximately 10,000 U/mL. The system reports the results adjusted for the dilution.

2. For assays employing antibodies, the possibility exists for interference by heterophile antibodies in the patient sample. Patients who have been regularly exposed to animals or have received immunotherapy or diagnostic procedures utilizing immunoglobulins or immunoglobulin fragments may produce antibodies, e.g. HAMA, that interfere with immunoassays. Additionally, other heterophile antibodies such as human anti-goat antibodies may be present in patient samples.[12,13]

   Such interfering antibodies may cause erroneous results. Carefully evaluate the results of patients suspected of having these antibodies.

3. The Access BR Monitor results should be interpreted in light of the total clinical presentation of the patient, including: symptoms, clinical history, data from additional tests, and other appropriate information.

4. Serum or plasma CA 15-3 antigen concentrations should not be interpreted as absolute evidence for the presence or absence of cancer. Elevated concentrations may be observed in the serum or plasma of patients with benign conditions, pregnancy[14,15] or other non-cancer disorders, as well as in breast cancer and other malignant diseases. The Access BR Monitor Assay should not be used as a cancer screening test.

5. The Access BR Monitor assay does not demonstrate any “hook” effect up to 30,000 U/mL.

PERFORMANCE CHARACTERISTICS

PERFORMANCE CHARACTERISTICS

METHODS COMPARISON

A comparison of 435 values using the Access BR Monitor assay on the Access Immunoassay system and a commercially available immunoassay kit gave the following statistical data using Deming calculations:

n	Range of Observations (U/mL)	Intercept (U/mL)	Slope	Correlation Coefficient (r)
435	0-250	1.92	0.82	0.91

DILUTION RECOVERY (LINEARITY)

Multiple dilutions of 3 samples containing various CA 15-3 antigen levels with Access Sample Diluent A resulted in the following data:

Sample 1	Expected Concentration (U/mL)	Determined Concentration (U/mL)	Recovery (%)
Neat	1,005.2	–	100.0
1:2	502.6	459.7	91.5
1:4	251.3	229.4	91.3
1:8	125.7	109.5	87.1
1:20	50.3	44.0	87.5
1:40	25.1	22.8	90.8
1:80	12.6	10.7	84.9
		Mean % Recovery	**88.9**

Sample 2	Expected Concentration (U/mL)	Determined Concentration (U/mL)	Recovery (%)
Neat	451.6	–	100.0
1:2	225.8	231.4	102.5
1:4	112.9	116.9	103.5
1:8	56.5	55.7	98.6
1:20	22.6	23.1	102.2
1:40	11.3	13.1	115.9
1:80	5.6	6.3	112.5
		Mean % Recovery	**105.9**

Sample 3	Expected Concentration (U/mL)	Determined Concentration (U/mL)	Recovery (%)
Neat	403.8	–	100.0
1:2	201.9	200.1	99.1
1:4	100.9	98.2	97.3
1:8	50.5	50.4	99.8
1:20	20.2	20.1	99.5
1:40	10.1	11.2	110.9
1:80	5.1	5.9	115.7
		Mean % Recovery	**103.7**

IMPRECISION

This assay exhibits total imprecision of ≤ 10% for concentrations between 15 and 500 U/mL, and ≤ 12% for concentrations greater than 500 U/mL. One study, using commercially available human serum based control material generating a total of 20 assays, 2 replicates per assay, over 20 days provided the following data, analyzed via analysis of variance (ANOVA).[16,17]

Sample	Grand Mean (n=40) (U/mL)	Within Run (%CV)	Between Run (%CV)	Total Imprecision (%CV)
Level 1	14.7	1.4	1.6	2.1
Level 2	98.0	2.2	4.1	4.6
Level 3	243.2	1.5	2.2	2.6
Level 4	661.8	1.9	1.8	2.6

ANALYTICAL SPECIFICITY / INTERFERENCES

Samples containing up to 500 mg/dL hemoglobin, 40 mg/dL bilirubin, 3,000 mg/dL triglyceride (triolein) or 6 g/dL protein (human serum albumin) do not affect the concentration of CA 15-3 antigen assayed.

The following table describes the cross-reactivity of the assay with common chemotherapeutic agents and other potential interferents.

Substance	Concentration Added	Expected (U/mL)	Observed (U/mL)	Mean % Recovery
5-Fluorouracil	500 µg/mL	25.3	25.7	101.8
Acetaminophen (Tylenol)	200 µg/mL	42.7	43.2	101.3
Amethopterin (Methotrexate)	250 µg/mL	33.5	32.1	95.7
Aspirin (Acetylsalicylic Acid)	500 µg/mL	42.7	42.9	100.4
B-Estradiol	10 µg/mL	41.4	42.3	102.4

Substance	Concentration Added	Expected (U/mL)	Observed (U/mL)	Mean % Recovery
Cis-Platinum (II) Diammine Dichloride (Cisplatin)	2,000 µg/mL	38.2	38.3	100.3
Cyclophosphamide	1,000 µg/mL	40.8	39.4	96.6
Doxorubicin Hydrochloride	100 µg/mL	41.5	41.5	100.0
Estrone 3-Sulfate, Na salt	10 µg/mL	41.1	41.1	100.1
Folinic Acid, Ca salt (Leucovorin)	200 µg/mL	40.5	41.4	102.2
Heparin, Li	8 U/mL	33.3	32.7	98.4
Heparin, Na	8 U/mL	34.8	35.1	101.0
Ibuprofen	400 µg/mL	42.7	43.5	101.9
Megesterol Acetate	40 µg/mL	38.2	40.8	106.8
Mitomycin C	15 µg/mL	41.1	40.5	98.4
Mitoxantrone Hydrochloride (Novantrone)	2 µg/mL	43.0	43.7	101.7
Multivitamin†	1:20	33.6	33.2	98.9
Paclitaxel	5 µg/mL	43.0	42.3	98.5
Tamoxifen Citrate	100 µg/mL	43.5	42.9	98.6
Testosterone	40 µg/mL	43.5	43.5	100.0
Vinblastine Sulfate	2 µg/mL	41.1	43.1	104.9
Vincristine Sulfate	2 µg/mL	41.1	43.2	105.0
Warfarin	1.5 mg/mL	38.4	37.4	97.5

† Multivitamin substances were at the following concentrations: 8.33 IU/mL Vitamin A, 200 µg/mL Vitamin C, 1.3 IU/mL Vitamin D, 0.1 IU/mL Vitamin E, 5 µg/mL Thiamin (B1), 5.67 µg/mL Riboflavin (B2), 66.7 µg/mL Niacin, 6.67 µg/mL Vitamin B6, 20 ng/mL Vitamin B12 and 1 µg/mL Biotin.

ANALYTICAL SENSITIVITY

The lowest detectable level of CA 15-3 antigen distinguishable from zero (Access BR Monitor Calibrator S0) with 95% confidence is < 0.5 U/mL. This value is determined by processing a complete six point calibration curve, controls, and 10 replicates of the zero calibrator in multiple (10) assays. The analytical sensitivity value is calculated from the curve at the point that is two standard deviations from the fitted zero calibrator signal.

ADDITIONAL INFORMATION

REVISION HISTORY

Revision F

IFU updated to add Dutch, Finnish, Macedonian, Traditional Chinese, and Estonian

SYMBOLS KEY

Glossary of Symbols is available at techdocs.beckmancoulter.com (document number C02724)

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