WHITEPAPER

BCA-225 - A Diagnostic Aid in the Determination of Metastatic Adenocarcinoma Origin

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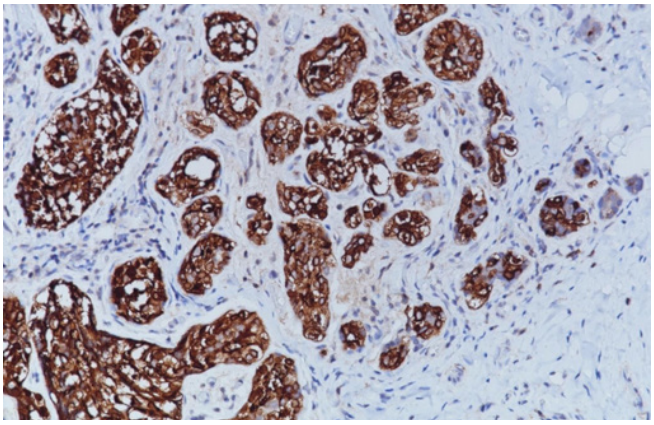
Adenocarcinoma that metastasizes from an unknown primary origin is a considerable oncologic problem. Except for prostate-specific antigen (PSA) and thyroglobulin, no single immunohistochemical marker is entirely site-specific. To investigate if additional markers could accurately predict the site of origin of common metastatic adenocarcinomas, a study was conducted on carcinomas of colon, breast, lung, ovary, and upper gastrointestinal tract (stomach, pancreas, and bile duct) with a panel of antibodies. Of the markers selected, breast carcinoma associated glycoprotein (BCA-225) was one of the most informative.[1]

BCA-225 protein differs in size and distribution from other breast carcinoma antigens. Unlike other antibodies against breast carcinoma antigens, BCA-225 does not react with benign or malignant colonic, stomach, liver, or parotid tissues.[2] This protein is localized in breast carcinoma malignancies and carcinoma of the uterine cervix and, therefore, can identify metastatic breast carcinoma lesions very effectively. Anti- BCA-225 antibody will label adenocarcinomas of the lung, ovary, and endometrium[3] and be used to detect skin carcinomas with sweat gland and sebaceous differentiation.[4]

Research has shown BCA-225 expression is commonly found in adenocarcinomas of the breast (98%), kidney (94%), ovary (80%), and lung (74%), but was infrequent in adenocarcinomas of the gastrointestinal tract (10-16%). Adenocarcinomas of the prostate, bile ducts, thyroid, endometrium, endocervix, and pancreas showed an intermediate frequency of BCA-225 expression (36-68%). While rare tumor cells in hepatocellular carcinomas can show reactivity for BCA-225, staining of more than 10% of the tumor cells was not seen in any of the hepatocellular carcinoma cases studied.[3]

Until more single highly sensitive and specific markers are developed for adenocarcinomas, the origin of a metastatic adenocarcinoma can best be suggested or excluded with clinicopathologic data combined with a panel of selected immunohistochemical markers, including BCA-225. Biocare Medical's IVD-labeled mouse monoclonal BCA-225 [Cu-18] is highly specific antibody for mammary tissue.[1,2] Clone Cu-18 was identified as specifically recognizing BCA-225 in breast carcinomas, in both the primary tumor and its metastatic derivatives.[2] Biocare's BCA-225 is available in concentrate and predilute format. Backed by our strict ISO and MDSAP compliant manufacturing practices, this antibody will come with first class quality and technical support.



Breast cancer stained with BCA-225 (Cu-18) antibody

Interested in utilizing BCA-225 in your laboratory?

Please call Biocare Medical at 1800-799-9499 or visit our website: https://biocare.net/product/bca-225-cu-18-antibody/.

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3. Loy S, *et al.* Distribution of BCA-225 in adenocarcinomas. An immunohistochemical study of 446 cases. Am J Clin Pathol. 1991; 96:326-9.

4. Ansai S, *et al.* An Immunohistochemical Study of BCA-225 in Various Skin Cancers. J Dermatol. 1994; 21:20-4.