ANTIGEN: CYTOKERATINS, HIGH MOLECULAR WEIGHT


IMMUNOGEN: Solubilized keratin extracted from human stratum corneum.

PRESENTATION: Tissue culture supernatant.

PROTEIN CONCENTRATION (mg/ml): 17.7

IMMUNOGLOBULIN CONCENTRATION (µg/ml): 56

REACTIVITY ACCORDING TO MANUFACTURER:
This antibody identifies keratins of approximately 66 kD and 57 kD in extracts of stratum corneum. In two-dimensional immunoblots, the major bands with which the antibody reacts are keratins No. 1, 5, 10 and 14 in the Moll catalog (MW 68 kD, 58 kD, 56.5 kD, 50 kD), respectively.
Reactivity in normal cells: The antibody labels squamous, ductal and other complex epithelia. It reacts with benign small acinar lesions of the prostate. It does not react with hepatocytes, pancreatic acinar cells, proximal renal tubules or endometrial glands. Mesenchymal tissues such as blood vessels, smooth muscle, skeletal muscle, and dermis, as well as nervous tissue are not labeled.
Reactivity in neoplastic cells: It is reactive with both squamous and ductal neoplasms and variably with those derived from simple epithelium. Consistently positive are squamous cell carcinomas, ductal carcinomas, most notably those of the breast, pancreas, bile duct and salivary gland, transitional cell carcinomas of the bladder and nasopharynx, thymomas, and epitheliod mesotheliomas. Adenocarcinomas are variably positive. This antibody is largely unreactive with adenomas of endocrine organs, carcinomas of the liver (hepatocellular), endometrium and kidney. Mesenchymal tumors, lymphomas, melanomas, neural tumors and neuroendocrine tumors are unreactive.

STAINING PROCEDURE ACCORDING TO MANUFACTURER:
Reactivity on formalin-fixed tissue is less consistent than that observed on Carnoy’s or metharcan-fixed material. Proteolytic treatment of formaldehyde-fixed material is necessary. Suggested dilution for LSAB or ABC methods is 1/50.

WORKING DILUTION: 1/100. Pretreatment with steamer (citrate buffer pH 6.0).

METHOD: LSAB+/PO. 1 h RT.

SPECIES CROSS-REACTIVITY: Human, donkey rabbit, horse (as per Dako).

ADDITIONAL INFORMATION (Gown et al., 1984 and 1985).

Reactivity of human normal tissues:
Skin: Squamous epithelium and apocrine gland ducts
Liver: Bile ducts.
Kidney: Collecting duct epithelia only.
Pancreas: Ductal cells.
Spleen/Lymph node/Skeletal muscle/Cardiac muscle: None.
Mammary gland: Duct cells. Some acinar cells.
Thyroid: Some follicular epithelia.
Small and large intestine: Some epithelia. Mesothelium.

Reactivity of neoplastic lesions:
Squamous cell carcinoma (skin, mammary gland, oral, vulva, lung): Positive
Ductal carcinoma of pancreas: Positive
Thymoma: Positive
Chordoma: Positive
Adenocarcinoma of salivary gland: Positive
Basal cell carcinoma of skin: Positive
Transitional cell carcinoma: Positive
Mesothelioma: Positive
Adenocarcinoma of colon: Positive
Wilms tumor of kidney: Positive
Adenocarcinoma of lung and colon: Variable positive
Papillary carcinoma of the thyroid: Variable positive
Adenocarcinoma of stomach: Variable positive
Adenocarcinoma of endometrium: Negative mostly
Thyroid adenoma: Negative mostly
Renal cell carcinoma: Mostly negative
Adenocarcinoma of gallbladder: Mostly negative
Hepatocellular carcinoma: Negative
Small cell carcinoma of lung: Negative
Pituitary adenoma: Negative
Islet cell tumor, pancreas: Negative
Colon carcinoid: Negative

CELLS/TISSUES STAINED (canine tissues unless specified, 2 day fixation):
Skin: All layers of the epidermis, slightly more intensely the lower ones. Apocrine glands. Sebaceous glands (especially basal cells). Hair follicle (multiple layers/levels of the follicle).
Lung: Respiratory epithelium, especially basal cells, and mesothelium. No staining in alveoli.
Kidney and liver: Nothing.

REFERENCES:


