Intended Use:
For Research Use Only. Not for use in diagnostic procedures.

Summary and Explanation:
Glypican-3 (GPC3), a member of the glypican family of glycosyl phosphatidylinositol-anchored cell-surface heparin sulfate proteoglycans, plays an important role in cell growth and differentiation (1). Using the 1G12 monoclonal antibody, GPC3 has been identified as a useful tumor marker for the diagnosis of Hepatocellular Carcinoma (HCC), hepatoblastoma, melanoma, testicular germ cell tumors, and Wilms’ tumor. GPC3 protein has been shown to be expressed in most hepatocellular carcinomas (HCC), but not in normal liver nor benign hepatic lesions, including dysplastic and cirrhotic nodules (1-4). Most patients with HCC have significantly elevated serum protein levels of GPC3 (3). Several studies report that GPC3 is a sensitive diagnostic marker for HCC and a tool for differentiating HCC from non-neoplastic and pre-neoplastic liver disease (3,4). In-house TMA-based studies have shown that GPC3 is positive in 90.4% (66/73) of hepatocellular carcinoma cases, and negative in 100% of cholangiocellular carcinoma, normal liver and hyperplasia cases.

Principle of Procedure:
Antigen detection in tissues and cells is a multi-step immunohistochemical process. The initial step binds the primary antibody to its specific epitope. After labeling the antibody with a primary antibody, a secondary antibody is added to bind to the primary antibody. An enzyme label is then added to bind to the secondary antibody; this detection of the bound antibody is evidenced by a colorimetric reaction.

Source: Mouse monoclonal
Species Reactivity: Human
Clone: 1G12
Isotype: IgG1
Protein Concentration: Call for lot specific Ig concentration.
Epitope/Antigen: C-terminal 70 amino acids
Cellular Localization: Membrane and cytoplasm
Positive Tissue Control: Hepatocellular carcinoma
Known Applications:
Immunohistochemistry (formalin-fixed paraffin-embedded tissues)
Supplied As: Buffer with protein carrier and preservative
Storage and Stability:
Store at 2°C to 8°C. The product is stable to the expiration date printed on the label, when stored under these conditions. Do not use after expiration date. Diluted reagents should be used promptly; any remaining reagent should be stored at 2°C to 8°C.

Staining Protocol Recommendations (intelliPATH FLX and manual use) Cont’d:

Peroxide Block: Block for 5 minutes with Peroxidized 1.

Pretreatment: Perform heat retrieval using Diva Decloaker. Refer to the Diva Decloaker data sheet for specific instructions.

Protein Block (Optional): Incubate for 5-10 minutes at RT with Background Punisher.

Primary Antibody: Incubate for 30 minutes at RT.

Probe: Incubate for 10 minutes at RT with a secondary probe.

Polymer: Incubate for 10-20 minutes at RT with a tertiary polymer.

Chromogen: Incubate for 5 minutes at RT with Biocare’s DAB – OR – Incubate for 5-7 minutes at RT with Warp Red.

References:
References Cont’d: