



CA19-9

IHC of CA19-9 on an FFPE Salivary Gland Tissue

Description CA19-9 (carbohydrate antigen 19-9 or sialylated Lewis (a) antigen) is a blood test from the tumor marker category. It was discovered in patients with Colon Cancer and Pancreatic Cancer in 1981. Increased levels of CA19-9 are also found in non-malignant conditions, such as Mirizzi's Syndrome and diseases of the bile duct and liver. The main use of CA19-9 is to determine whether a pancreatic tumor is secreting it; if that is the case, then the levels should fall when the tumor is treated, and they may rise again if the disease recurs.

CA19-9 antigen is highly expressed in Gastrointestinal (gastric, pancreatic, and colonic) Adenocarcinomas and salivary gland Mucoepidermoid Carcinomas. CA19-9 is usually not reactive with breast, kidney, and prostate Carcinomas, but is reactive with sialylated Lea-active pentasaccharide (sialylated lacto-N-fucopentaose II), which is enzymatically synthesized by sialylation of Type 1 carbohydrate chains.

Antibody Type	Mouse Monoclonal	Clone	121SLE
Isotype	IgM	Reactivity	Paraffin, Frozen
Localization	Cytoplasmic	Control	Colon, Salivary Gland
Storage	Store at 2°-8°C	Stability	2 years

For long-term storage of the concentrated antibody, it is recommended that aliquots of the antibody be frozen at -20°C in glycerol 50% (frost-free freezers are not recommended). Repeated freezing and thawing must be avoided. Dilute using an antibody diluent such as ImmunoDetector Protein Block/Antibody Diluent (BSB 0040 and BSB 0041) or ImmunoDNA Background Blocker (BSB 0103-BSB 0107).

Presentation CA 19-9 is a mouse monoclonal antibody derived from cell culture supernatant that is concentrated, dialyzed, filter sterilized and diluted in buffer pH 7.5, containing BSA and sodium azide as a preservative.

Availability	Catalog No.	Antibody Type	Dilution	Volume/QTY
	BSB 5106	Prediluted	Ready-To-Use	3.0 ml
	BSB 5107	Prediluted	Ready-To-Use	7.0 ml
	BSB 5108	Prediluted	Ready-To-Use	15.0 ml
	BSB 5109	Concentrated	1:25-1:100	0.1 ml
	BSB 5110	Concentrated	1:25-1:100	0.5 ml
	BSB 5111	Concentrated	1:25-1:100	1.0 ml
	BSB 5112	Control Slides		5

Note: For concentrated antibodies, please centrifuge prior to use to ensure recovery of all product.

- References**
1. Gatalica Z, et al. *Applied IHC*. 1994;2(3):205-211
 2. Encabo G, et al. *Bull Cancer (Paris)*. 1986;73:256-9
 3. Basso D, et al. *Med Sci Res*. 1989;17:13-4
 4. Tabuchi Y, et al. *Cancer*. 1990;66:1529-33
 5. Atkinson BF, et al. *Gastrointestinal*. 1982;42:4820
 6. Koprowski H, et al. *Lancet*. 1982;June12:1332

Protocol Suggested protocol on reverse

Recommended Immunohistochemical Protocol

- Pretreatment**
1. Cut and mount 3-4 micron formalin-fixed paraffin-embedded tissues on positive charged slides.
 2. Air dry for 2 hours at 58° C.
 3. Deparaffinize, dehydrate and rehydrate tissues.
 4. Subject tissues to heat epitope retrieval using a suitable retrieval solution such as **ImmunoDNA Retriever with Citrate** (BSB 0020-BSB 0023) or **EDTA** (BSB 0030-BSB 0033).
 5. Any of three heating methods may be used:
 - a. **Electric Pressure Cooker**
Place standoff rack at base of pressure cooker. Add 1-2 inches of distilled water to the pressure cooker and turn heat to high, and incubate for 15 minutes. Open and immediately transfer slides to room temperature.
 - b. **Water Bath Method**
Place tissues/slides in a pre-warmed staining dish or coplin jar containing the **ImmunoDNA Retriever with Citrate** or **EDTA** in a water bath set at 95°-99° C. Incubate for 30-60 minutes.
 - c. **Conventional Steamer Method**
Place tissues/slides in a pre-warmed staining dish or coplin jar containing the **ImmunoDNA Retriever with Citrate** or **EDTA** in a Steamer, cover and steam for 30-60 minutes.
 6. After heat treatment, transfer slides in **ImmunoDNA Retriever with Citrate** or **EDTA** to room temperature and let stand for 15-20 minutes.
 7. Wash slides with IHC wash buffer or DI water.
 8. Continue IHC staining protocol.

Immunohistochemical Protocol

Step	ImmunoDetector (AP or HRP)	PolyDetector (AP or HRP)
Peroxidase/AP Block	5 minutes	5 minutes
Primary Antibody	30 minutes	45 minutes
Secondary Biotinylated Link	10 minutes	Not Applicable
AP or HRP Label	10 minutes	45 minutes
Substrate-Chromogen	5-10 minutes	10 minutes
Counterstaining	Time varies with counterstain	Time varies with counterstain

