



DOG1

IHC of DOG1 on an FFPE GIST Tissue

Description DOG1 (discovered on GIST 1), a cell-surface protein of unknown function, is expressed strongly on the cell surface of GISTs and is rarely expressed in other soft tissue tumors. Among GIST cases with c-Kit mutations, the DOG1 antibody identified 11% more cases than a c-Kit antibody.

DOG1 identifies the vast majority of both c-Kit negative and PDGFRA mutated GIST cases that may still benefit from imatinib mesylate (Gleevec), an inhibitor of the kit tyrosine kinase. In addition, DOG1 immunoreactivity is seen in fewer cases of mesenchymal and epithelial tumors, and melanomas when compared with c-Kit. The use of this highly-sensitive and specific novel marker should increase the accuracy of GIST diagnosis.

Antibody Type	Mouse Monoclonal	Clone	SP31
Isotype	IgG	Reactivity	Paraffin, Frozen
Localization	Cytoplasmic, Membranous	Control	GIST
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 DOG-1 is a rabbit 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 6268	Prediluted	Ready-To-Use	3.0 ml
	BSB 6269	Prediluted	Ready-To-Use	7.0 ml
	BSB 6270	Prediluted	Ready-To-Use	15.0 ml
	BSB 6271	Concentrated	1:250-1:1000	0.1 ml
	BSB 6272	Concentrated	1:250-1:1000	0.5 ml
	BSB 6273	Concentrated	1:250-1:1000	1.0 ml
	BSB 6274	Control Slides		5

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

- References**
1. Espinosa I, et al. *Am J Surg Pathol*. 2008;Feb;32(2):210-8.
 2. Parfitt JR, et al. *Histopathology*. 2008;Jun;52(7):816-23.
 3. West RB, et al. *Am J Pathol*. 2004;Jul;165(1):107-13.

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

