



Alpha-1-Antichymotrypsin

IHC of Alpha-1-Antichymotrypsin on an FFPE Tonsil Tissue

Description Alpha-1-Antichymotrypsin is a glycoprotein found in the alpha (1)-globulin region in human serum. It inhibits chymotrypsin-like proteinases *in vivo* and has cytotoxic killer-cell activity *in vitro*. The protein also has a role as an acute-phase protein and is active in the control of immunologic and inflammatory processes, and as a tumor marker. It is a member of the serpin superfamily.

Alpha-1-Antichymotrypsin antibody reacts with histiocytes and histiocytic neoplasms. Its major application is defining the presence of Alpha-1-Antichymotrypsin in histiocytes and tumors derived from them. In eosinophilic granuloma and malignant histiocytosis, the reaction for this marker is heterogeneous in intensity and distribution. In fibrous histiocytomas, under certain circumstances, a diffuse homogeneous reaction may be observed.

Antibody Type	Rabbit Polyclonal	Clone	N/A
Isotype	N/A	Reactivity	Paraffin, Frozen
Localization	Cytoplasmic	Control	Tonsil, Lymph Node
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 Alpha-1-Antichymotrypsin is a purified immunoglobulin fraction of rabbit antiserum that is 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 5001	prediluted	Ready-To-Use	3.0 ml
	BSB 5002	prediluted	Ready-To-Use	7.0 ml
	BSB 5003	prediluted	Ready-To-Use	15.0 ml
	BSB 5004	concentrated	1:1000-1:5000	0.1 ml
	BSB 5005	concentrated	1:1000-1:5000	0.5 ml
	BSB 5006	concentrated	1:1000-1:5000	1.0 ml
	BSB 5007	control slides		5

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

- References**
1. Isaacson P, et al. *Lancet*. 1979;2:964-965
 2. Palmer PE, et al. *Am J Clin Pathol*. 1974;62:350-354
 3. Palmer PE, et al. *Cancer*. 1980;45:1424-1431
 4. Kindblom LG, et al. *Hum Pathol*. 1982;13:834-840
 5. Raintoft I et al. *Hum Pathol*. 1979;10:419-424
 6. Isaacson P, et al. *Alpha-1 antitrypsin in human macrophages. Lancet II*. 1979;964
 7. Silva FG, et al. *Hum Pathol*. 1984;15:494

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

