



ACTH

IHC of ACTH on an FFPE Pituitary Tissue

Description Adrenocorticotrophic Hormone (ACTH or corticotropin) is a polypeptide hormone synthesized from POMC, (Pro-opiomelanocortin) and secreted from corticotropes in the anterior lobe of the pituitary gland in response to Corticotropin-releasing Hormone (CRH) released by the hypothalamus. It consists of 39 amino acids.

ACTH is a useful marker in the classification of pituitary tumors and the study of pituitary disease. It reacts with ACTH-producing cells (corticotrophs), as well as other tumors (e.g., some Small-Cell Carcinomas present in lung tissue) causing Paraneoplastic Syndromes by secreting ACTH.

Antibody Type	Rabbit Ployclonal	Clone	N/A
Isotype	N/A	Reactivity	Paraffin, Frozen
Localization	Cytoplasmic	Control	Normal Pituitary
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 ACTH 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 5015	Prediluted	Ready-To-Use	3.0 ml
	BSB 5016	Prediluted	Ready-To-Use	7.0 ml
	BSB 5017	Prediluted	Ready-To-Use	15.0 ml
	BSB 5018	Concentrated	1:500-1:2000	0.1 ml
	BSB 5019	Concentrated	1:500-1:2000	0.5 ml
	BSB 5020	Concentrated	1:500-1:2000	1.0 ml
	BSB 5021	Control Slides		5

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

References

- Hassoun J, et al. *Arch Pathol Lab Med.* 1982;106:25
- Mukai K, et al. 1980;42:42
- Kovacs K, Rosai J, *New York: Masson Publ.* 1980;3

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

