

ACTH (Adrenocorticotrophic Hormone) AH26 + 57

Format	Catalog No.	Pack size	Dilution
Concentrated	G0268,A, B,C	0.1, 0.5, 1.0 mL	1:100 - 200
Prediluted	G0268,AA, BB	6.0, 3.0 mL	Ready to use

ANTIBODY SPECIFICATIONS

- **HOST SPECIES:** Mouse
- **CLONE:** AH26 & 57
- **ISOTYPE:** IgG1, kappa (AH26); IgG1, kappa (57)
- **CELLULAR LOCALIZATION:** Cytoplasmic
- **IMMUNOGEN:** Synthetic peptide corresponding to aa 1-24 of human ACTH (AH26); N-terminal fragment of human ACTH conjugated to KLH (57)
- **MOLECULAR WEIGHT:** ACTH is ~5kDa, and the POMC precursor is ~30kDa. The molecular weight of POMC depends upon isoform variation and post-translational modifications.
- **SPECIES REACTIVITY:** Human, Mouse, and Rat. Expected to show a broad species reactivity
- **POSITIVE CONTROLS:** Normal pituitary gland or pituitary tumor

INTENDED USE

This antibody is intended **for research use only (RUO)** and is not approved for diagnostic or therapeutic applications. It is optimized for the detection of ACTH protein in formalin-fixed, paraffin-embedded (FFPE) human tissues by immunohistochemistry (IHC).

SUMMARY AND APPLICATION

The anterior pituitary produces the 39 amino acid active peptide known as ACTH (also known as corticotropin). The 267 amino acid polypeptide hormone precursor known as POMC (pro-opiomelanocortin or corticotropin-lipotropin) undergoes substantial, tissue-specific posttranslational processing by convertases. Ten hormone chains, including NPP, ACTH, beta-MSH, gamma-MSH, CLIP (corticotropinlike intermediate peptide), lipotropin-beta, lipotropin-gamma, beta-endorphin, and met-enkephalin, are produced when POMC is broken down. T-cells, B-cells, and macrophages—all immune system cells—also release ACTH in reaction to stress-related stimuli.

SCIENTIFIC BACKGROUND

This antibody does not react with CLIP (aa 17–39 of ACTH); instead, it is specific to Synacthen (aa 1–24 of ACTH). In the study of pituitary disorders and the classification of pituitary tumours, anti-ACTH is a helpful marker. It interacts with corticotrophs, which are cells that produce ACTH. Additionally, by secreting ACTH, it may react with other tumours (such as certain lung small cell carcinomas) to cause paraneoplastic syndromes.

RECOMMENDED USAGE

- **IHC Protocol Highlights:**
 - Dilution: 1–2 µg/mL

- o Incubation: 30 minutes at room temperature
 - o Antigen Retrieval: Heat in 10 mM Tris with 1 mM EDTA (pH 9.0) at 95°C for 45 minutes, followed by cooling
- **Specimen Type:** FFPE sections, preferably ~4 µm

FORMULATION & STORAGE:

- Buffer: 10 mM PBS, 0.05% BSA, 0.05% sodium azide
- Storage:
 - o Dilution: 1–2 µg/ML
 - o Without azide: –20 to –80°C
- Shelf Life: 24 months under proper conditions
- Hazard Classification: Non-hazardous; no MSDS required

LIMITATIONS

- Interpretation must be made by a qualified pathologist
- Tissue fixation and handling may affect staining quality
- Negative results do not always indicate absence of antigen—consider panel testing

PRECAUTIONS

- Contains 0.05% sodium azide – avoid ingestion and contact with skin or mucosa
- Wear gloves and avoid contact with eyes or mucosa
- Do not use reagents past expiration or if packaging appears compromised
- Do not pipette by mouth or reuse slides/containers without proper sterilization

TECHNICAL SUPPORT

For technical assistance, please contact Genebio Solution's Technical Support at www.genebiosolution.com