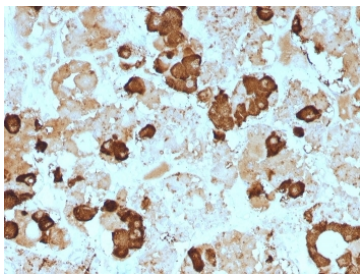
POMC Antibody / ACTH / Synacthen / N-Terminal [clone 57] (V3179)

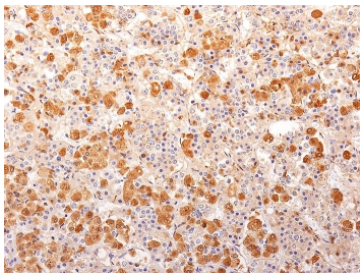
Catalog No.	Formulation	Size
V3179-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V3179-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V3179SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

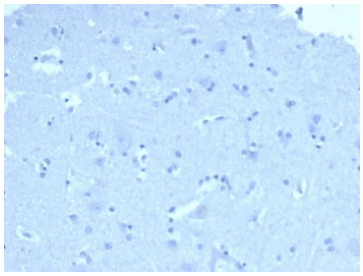
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	57
Purity	Protein G affinity chromatography
UniProt	P01189
Localization	Cytoplasm
Applications	ELISA (order BSA/sodium Azide-free Format For Coating) : Flow Cytometry : 0.5-1ug/10^6 cells Immunofluorescence : 0.5-1ug/ml Immunohistochemistry (FFPE) : 0.5-1ug/ml for 30 min at RT
Limitations	This POMC antibody is available for research use only.



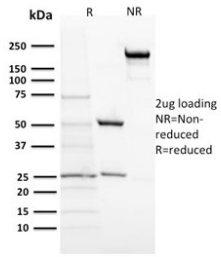
IHC staining of FFPE human pituitary gland with POMC antibody (clone 57). HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.



IHC: Formalin-fixed, paraffin-embedded human pituitary gland stained with ACTH / POMC antibody (clone 57). Required HIER: boil tissue sections in 10mM Citrate Buffer, pH 6.0, for 10-20 min followed by cooling at RT for 20 minutes.



Negative control: IHC staining of FFPE human brain tissue with POMC antibody (clone 57). HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.



SDS-PAGE Analysis of Purified, BSA-Free POMC Antibody (clone 57). Confirmation of Integrity and Purity of the Antibody.

Description

POMC antibody is used to investigate proopiomelanocortin, a prohormone synthesized in the anterior pituitary, hypothalamus, and skin. POMC undergoes tissue specific cleavage to produce multiple biologically active peptides, including adrenocorticotropic hormone, melanocyte stimulating hormones, and beta endorphin. These peptides regulate diverse physiological processes ranging from adrenal steroidogenesis and stress responses to pigmentation and energy balance.

The biosynthesis of POMC begins as a single polypeptide chain that is subsequently cleaved by prohormone convertases into distinct peptide hormones. The specific cleavage products depend on the tissue and developmental context. In the pituitary, adrenocorticotropic hormone stimulates glucocorticoid release from the adrenal cortex. In the hypothalamus, alpha melanocyte stimulating hormone regulates appetite and energy homeostasis. In skin, melanocortins contribute to pigmentation by modulating melanin production. Beta endorphin, another cleavage product, plays an important role in pain modulation and stress adaptation.

This POMC antibody derived from clone 57 offers reliable detection of the precursor molecule, enabling researchers to examine the regulation of peptide hormone synthesis. Clone 57 has been widely used to trace POMC expression in the pituitary gland and hypothalamic nuclei, providing valuable information on endocrine physiology and neuroendocrine signaling. By highlighting the distribution of the prohormone, this antibody helps define the pathways leading to hormone production in different tissues.

Studies into stress responses, feeding behavior, pigmentation disorders, and pituitary tumors often rely on POMC detection. Researchers can assess the activation of specific signaling cascades by evaluating POMC synthesis and cleavage. In oncology, POMC related peptides have been implicated in certain paraneoplastic syndromes, making their detection important for understanding tumor biology. The dependable binding of clone 57 provides consistent results across these varied applications.

NSJ Bioreagents offers this POMC antibody to support investigations in endocrinology, neuroscience, and metabolism. By providing a dependable reagent, the company ensures accurate detection of POMC in experimental systems. Alternate designations such as proopiomelanocortin antibody, adrenocorticotropic hormone precursor antibody, ACTH precursor antibody, and beta endorphin precursor antibody illustrate the multiple names used by researchers for this versatile prohormone.

Application Notes

The optimal dilution of the ACTH / POMC antibody for each application should be determined by the researcher.

1. View the recombinant version of this ACTH antibody.

Immunogen

An N-terminal peptide (within AA 1-24) from the Synacthen/ACTH region of human POMC was used as the immunogen for this POMC antibody.

Storage

Store the POMC antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

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