

Product datasheet for **AM50155PU-S**

ACTH (POMC) (1-24) Mouse Monoclonal Antibody [Clone ID: SPM333]

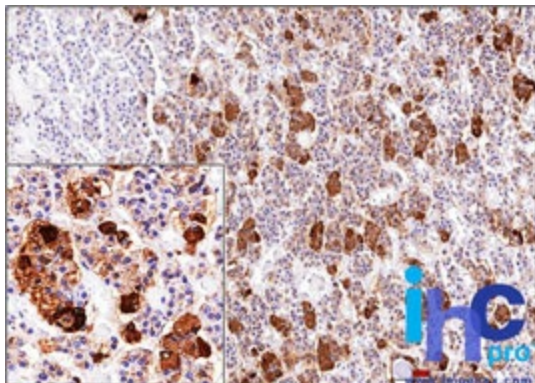
Product data:

Product Type:	Primary Antibodies
Clone Name:	SPM333
Applications:	FC, IF, IHC, IP, WB
Recommended Dilution:	ELISA: Use BSA free Antibody for coating. Flow Cytometry: 0.5-1 µg/million cells. Immunofluorescence: 1-2 µg/ml. Western Blotting: 0.5-1 µg/ml. Immunoprecipitation: 1-2 µg/500 µg protein lysate. Immunohistochemistry on Frozen and Formalin-fixed Sections: 0.5-1.0 µg/ml for 30 minutes at RT. No special pretreatment is required for staining of formalin-fixed tissues. Positive Control: Normal pituitary gland or pituitary tumor.
Reactivity:	Human, Mouse, Rat
Host:	Mouse
Isotype:	IgG1
Clonality:	Monoclonal
Immunogen:	Synthetic peptide corresponding to aa1-24 of human ACTH.
Specificity:	ACTH (same as Corticotropin) is a 39 amino acid active peptide produced by the anterior pituitary. This Monoclonal Antibody is specific to Synacthen (aa1-24 of ACTH); does not react with CLIP (aa17-39 of ACTH). POMC (pro-opiomelanocortin or corticotropin-lipotropin) is a 267 amino acid polypeptide hormone precursor that goes through extensive, tissue-specific posttranslational processing by convertases. POMC is cleaved into ten hormone chains named NPP, ACTH, alpha-MSH (Melanocyte Stimulating Hormone), beta-MSH, gamma-MSH, CLIP (corticotropin-like intermediary peptide), Lipotropin-beta, Lipotropin-gamma, beta-endorphin and Met-enkephalin. ACTH is also produced by cells of immune system (T-cells, B-cells, and macrophages) in response to stimuli associated with stress. Anti-ACTH is a useful marker in classification of pituitary tumors and the study of pituitary disease. It reacts with ACTH-producing cells (corticotrophs). It also may react with other tumors (e.g. some small cell carcinomas of the lung) causing paraneoplastic syndromes by secreting ACTH. Cellular Localization: Cytoplasmic.



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Formulation:	10mM PBS State: Purified State: Liquid purified IgG fraction from Bioreactor Concentrate Stabilizer: 0.05% BSA Preservative: 0.05% Sodium Azide
Concentration:	lot specific
Purification:	Protein A/G Chromatography
Conjugation:	Unconjugated
Storage:	Store undiluted at 2-8°C.
Stability:	Shelf life: one year from despatch.
Predicted Protein Size:	ACTH is ~5 kDa, and the POMC precursor is ~30 kDa.
Gene Name:	proopiomelanocortin
Database Link:	Entrez Gene 5443 Human P01189
Background:	<p>ACTH (Adrenocorticotrophic hormone) is produced and secreted by the anterior pituitary gland, and is a key component of the hypothalamic-pituitary-adrenal axis. ACTH is synthesized from the precursor molecule pre-opiomelanocortin (POMC). POMC undergoes proteolytic cleavages and processing to generate not only ACTH but also a number of other small biologically active peptides including alpha-MSH and beta-endorphin, all in cell type specific manners. The production of ACTH is triggered by biological stress. ACTH, in turn, then stimulates the secretion of corticosteroids by the adrenal cortex. The half-life of ACTH in human blood is only about ten minutes. An excess of ACTH can cause Cushing's syndrome whereas ACTH deficiency can result in secondary adrenal insufficiency.</p> <p>ACTH consists of 39 amino acids (aa), and can be proteolytically cleaved into different active fragments including CLIP (corticotropin-like intermediate lobe peptide), consisting of aa 17-39, which stimulates insulin production. Synacthen is an active synthetic form of ACTH, corresponding to the first 24 aa, which is used to conduct ACTH stimulation tests.</p>
Synonyms:	Corticotropin, POMC, Adrenocorticotrophic hormone

Product images:

Formalin-paraffin human pituitary gland stained with ACTH Antibody (Clone SPM333).