

Name	Tetracosactide Acetate (ACTH 1-24)
Cat #	PP-1750
Size	100 mg
CAS#	16960-16-0
Mol. Mass	2933.5
Formula	C ₁₃₆ H ₂₁₀ N ₄₀ O ₃₁ S
Sequence	H-Ser-Tyr-Ser-Met-Glu-His-Phe-Arg-Trp-Gly-Lys-Pro-Val-Gly-Lys-Lys-Arg-Arg-Pro-Val-Lys-Val-Tyr-Pro-OH
Purity	>98%
Appearance	White to off-white powder
Storage Conditions	Store at -20 C, keep dry

Adrenocorticotrophic hormone (ACTH or corticotropin) is a polypeptide tropic hormone produced and secreted by the anterior pituitary gland. It is an important component of the hypothalamic-pituitary-adrenal axis and is often produced in response to biological stress (along with corticotropin-releasing hormone from the hypothalamus). Its principal effects are increased production of androgens and, as its name suggests, cortisol from the adrenal cortex. The main function of ACTH is to regulate the steroid hormone cortisol, which is released by the adrenal cortex.

ACTH increases the synthesis and release of all adrenal steroids, aldosterone, cortisol and adrenal androgens. It is the principal modulator of cortisol, the most important glucocorticoid in man. As the cortisol level in blood increases, release of ACTH is inhibited directly at the pituitary level. Through this same mechanism, decreasing cortisol levels lead to elevated ACTH levels. Biologically active ACTH results from enzymatic cleavage of a large precursor molecule, pro-opiomelanocortin (POMC). This molecule contains within its structure the amino acid sequences of ACTH, Pro-ACTH, β -melanocyte stimulating hormone, lipotropin, as well as endorphin and the enkephalins

ACTH is secreted in a pulsatile manner. These small pulses are superimposed on a characteristic diurnal fluctuation of greater amplitude. In healthy individuals, ACTH reaches a peak in the early morning (6:00 - 8:00 hour) and levels become lowest late in the day and near the beginning of the sleep period. ACTH levels are measured when there is a hormonal problem with the body.

In Cushing's disease and in ectopic ACTH syndromes, the diurnal pattern of ACTH secretion is generally absent. Stress may also override the diurnal variation.

Related items:

PP-1750	Tetracosactide Acetate (ACTH 1-24)
SP-100819-5	[Glu10] - ACTH (1 - 17) MW: 2165.50
SP-100820-1	Biotin-ACTH (1-39), (MW: 4767.47)
SP-103048-1	ACTH (18-39) (MW: 2692.02)
SP-51725-1	ACTH(4-10), Human [H-Met-Glu-His-Phe-Arg-Trp-Gly-OH; MW: 962.1]
SP-52315-1	ACTH(1-39), MW: 4541.1]
SP-55135-1	ACTH (1-14) [H-Ser-Tyr-Ser-Met-Glu-His-Phe-Arg-Trp-Gly-Lys-Pro-Val-Gly-OH; MW: 1680.9]
SP-55156-1	ACTH (1-16), Human MW: 1937.27
SP-55159-1	ACTH (1-17), Human MW: 2093.5
SP-55173-1	ACTH (1-4) peptide [H-Ser-Tyr-Ser-Met-OH; MW: 486.6]
SP-55215-1	ACTH(18-39 MW: 2465.7
SP-55222-1	ACTH(1-24), MW: 2993.5]

PP-1750

141022P



Certificate of Analyses (COA)

Lot No.:	BP1409181	Release Date:	2014-09-18
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Test	Specification	Results
Appearance:	White to off-white crystalline powder or lumps	White powder
Identity:	2933.5 ± 1.0	2933.3
Amino acids analysis:	Ser: 1.8~2.2	Ser: 2.10
	Glx: 0.9~1.1	Glx: 0.95
	Val: 2.8~3.2	Val: 3.05
	Tyr: 1.8~2.2	Ile: 1.98
	Met: 0.9~1.2	Met: 0.95
	Lys: 3.6~4.4	Lys: 4.15
	His: 0.9~1.2	His: 0.92
	Phe: 0.9~1.2	Phe: 1.12
	Arg: 2.8~3.2	Arg: 2.92
	Trp: 0.6~1.2	Trp: 0.85
Gly: 1.8~2.2	Gly: 1.95	
Pro: 2.8~3.2	Pro: 3.12	
Purity (By HPLC) :	Not Less than 98.0%;	99.13%
Residual solvents:	≤0.25%total; ≤0.1%individual; ≤0.01%CH ₂ CN	Complies
Related Peptide Peptide Content:	Total Impurity ≤ 2.0% Largest Single Impurity ≤0.5%	TI =0.87% LSI =0.34%
Water (K.F.):	Not Less than 85.0%	89.1%
Acetate acid:	Not more than 5%	4.1%
Bacterial Endotoxins	Not more than 10	6.8%
Q.C	Not more than 50IU/mg	Complies
		Pass

Release By: _____
Quality Control

Date: