

## Chengdu KaiJie Biopharm Co., Ltd.

Segment 1, Industrial Road, Dayi County, Chengdu, Sichuan, P. R. China, 611330 Tel: 86-28-88208155, Fax: 86-28-88203632 WEB: www.kjpep.com

## **Certification of Analysis**

| Product Name          |                             | Tetracosactide Acetate (ACTH1-24) |   |                               |                |
|-----------------------|-----------------------------|-----------------------------------|---|-------------------------------|----------------|
| CAS No. 16960-1       |                             | 6-0                               | Molecular Formula   | $C_{136}H_{210}N_{40}O_{31}S$ |                |
| Molecular Weight 2933 |                             | 2933.5                            | 5   | Batch No.                     | 20100406       |
| Manufacturing Date    |                             | 04/06/20                          | 010   | Expire date                   | 2 years        |
| Storage               |                             | 2~8 C                             |   | Retest Date                   | 04/05/2012     |
| Sequence              |                             |                                   | Ser-Tyr-Ser-Met-Glu-His-Phe-Arg-Trp-Gly-<br>Lys-Pro-Val-Gly-Lys- Lys-Arg-Arg-Pro-Val- |                               |                |
|                       |                             | Lys-Val-Tyr-Pro-OH                |   |                               |                |
|                       |                             |                                   | Lys- vai-   | Tyr-Pro-OH                    |                |
| TEST                  |                             | SPECIFICATION                     |   | RESULT                        |                |
| 1                     | Appearance                  |                                   | White to Off-white powder   |                               | Complies       |
| 2                     | Solubility                  |                                   | Soluble in water and in a 1% glacial acetic acid                                      |                               | Complies       |
| 3                     | Identity by HPLC            |                                   | The retention is same with the reference substance                                    |                               | Complies       |
| 4                     | Specific Optical Rotation   |                                   | -99.0 ~-109.0°(c=1, 1%HAc)  |                               | -102.15°       |
| 5                     | Amino Acid Composition      |                                   | $\pm 10\%$ of theoretical   |                               | Complies       |
| 6                     | Water Content(Karl Fischer) |                                   | ≤ 8.0%  |                               | 3.90%          |
| 7                     | Acetate Content (By HPLC)   |                                   | ≤13.0%  |                               | 11.46%         |
| 8                     | Peptide Purity              |                                   | ≥95.0%  |                               | 99.59%         |
| 9                     | Related Substance(By HPLC)  |                                   | Total Impurities(%)≤2.0%<br>Largest Single Impurity(%)≤1.0%                           |                               | 0.42%<br>0.25% |
| 10                    | Bacterial Endotoxins        |                                   | ≤50IU/mg  |                               | ≤5IU/mg        |
| 11                    | Assay                       |                                   | 97.0~103.0%   |                               | 99.11%         |

Quality Control Assurance By Zhouzhongbing Date: 2010-04-19

**Quality Assurance Department**