

RayBiotech, Inc.

3607 Parkway Lane suite 200
Norcross, GA 30092
Tel: 770-729-2992, 1-888-494-8555
Fax: 770-206-2393
Website: www.raybiotech.com
Email: info@raybiotech.com

Certificate of Analysis and Data Sheet

Recombinant Exendin-4

Catalog No.
228-10419

Source
Escherichia Coli

Synonyms
Exenatide.

Introduction

Exedin-4 Recombinant is a glucagon like peptide-1 receptor agonist. The native hormone is produced in the gut of Gila monster *Heloderma suspectum* (a type of reptile found in the desert) that stimulates insulin production without causing threateningly low blood sugar, which can occur after using insulin and some anti-diabetes products. Recently, researchers used extracted saliva from gila monsters to create an unprecedented breakthrough in Diabetes Type 2 treatment. Unlike other products taken for type 2 diabetes, Exedin-4 has not been linked with weight gain and actually resulted in weight loss, according to the researchers. Exedin-4 enhances glucose-dependant insulin secretion, suppresses inappropriately elevated glucagon secretion and slows gastric emptying in vivo. It also promotes B-cell proliferation and neogenesis in vitro and in animal models. Exedin-4 stimulates an increase in acinar cAMP, without stimulating the release of amylase.

Description

Exendin-4 Recombinant is a novel 39-amino acids peptide having a molecular mass of 4186.7 Dalton, which shares 53% sequence homology with GLP-17-36 amide and interacts with the same membrane receptor.

The Exendin-4 is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile Filtered White lyophilized (freeze-dried) powder.

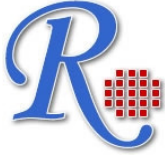
Formulation:

The Exendin-4 peptide was lyophilized after extensive dialyses against 20mM PBS and contains 4% mannitol.

Solubility

It is recommended to reconstitute the lyophilized Exendin Recombinant in sterile 18M Ω -cm H₂O not less than 100 μ g/ml, which can then be further diluted to other aqueous solutions.

**The products are furnished for LABORATORY RESEARCH USE ONLY.
Not for diagnostic or therapeutic use.**



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Stability

Lyophilized Exendin Recombinant although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution Exendin-4 should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

Please prevent freeze-thaw cycles.

Purity

Greater than 95.0% as determined by:

- (a) Analysis by RP-HPLC.
- (b) Analysis by SDS-PAGE.

Amino acid sequence

The sequence determined and was found to be His-Gly-Glu-Gly-Thr-Phe-Thr-Ser-Asp-Leu-Ser-Lys-Gln-Met-Glu-Glu-Glu-Ala-Val-Arg-Leu-Phe-Ile-Glu-Trp-Leu-Lys-Asn-Gly-Gly-Pro-Ser-Ser-Gly-Ala-Pro-Pro-Pro-Ser.

Biological Activity

1. Regulates Glucose levels rapidly
2. Reduces Insulin resistance
3. Reduces Glucagon
4. Reduces HbA1c
5. Stimulates beta cell growth which stimulates insulin production.

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