China

5box

Hongbaiyi

COA, HPLC MR

1mg/vial, 10vials/box

HBY-ACE 031

3000kg/Month

ACE 031

Negotiable

Raw Novel Muscle - Building Agent 99% ACE 031 Peptide White Powder 1mg / Vial

Basic Information

- Place of Origin:
- Brand Name:
- Certification:
- Model Number:
- Minimum Order Quantity:
- Price:
- Packaging Details:
- Delivery Time:
- Payment Terms:
- Supply Ability:



Product Specification

- Peptide Name:
- Aspect:
- Alias:
- Fineness:
- Specification:
- Shelf Life:
- Highlight:
- White Powder ACVR2B 99% 1mg/vial 2 Years 99% ACE 031 Peptide,
- Muscle Building ACE 031 Peptide, 1mg / Vial ACE 031 Peptide



More Images





Our Product Introduction

Product Description



Raw Novel Muscle - building Agent 99% ACE 031 White Powder 1mg / vial

Basic Information Form of ACE 031

Name	ACE 031
Alias	ACVR2B
Aspect	White Powder
Fineness	99%
Specifications	1mg/vial, 10vials/box
Stability	2 years

What Is ACE 031

ACE-031 (Neuromuscular Disease) ACE-031 is a novel, muscle-building agent that is being developed for the treatment of patients with Duchenne Muscular Dystrophy with the goal of improving strength and preserving physical function. What is ACE-031? ACE-031 is an investigational protein therapeutic that builds muscle and increases strength by inhibiting molecules that bind to and signal through a cell surface receptor called Activin Receptor Type IIB (ActRIIB). ACE-031 is a recombinant fusion protein that is produced by joining a portion of the human ActRIIB receptor to a portion of a human antibody. This creates a freely circulating, decoy version of ActRIIB which removes proteins, such as GDF-8 (myostatin) and other related molecules that limit the growth and strength of muscle. Muscle growth is regulated by proteins in the TGF-? protein superfamily that serve as "on" or "off" switches for muscle production.

Several molecules including GDF-8 interact with the ActRIIB receptor and send an "off" signal to stop muscle production. In the absence of these "off" switch molecules that signal through the ActRIIB receptor, muscle mass increases dramatically. In nature, this effect has been observed in numerous species, particularly in animals that have been bred for increased musculature and strength. For example, Belgian Blue cattle lack the gene for GDF-8, which is one of several molecules that activate the ActRIIB receptor. A deficiency of this protein results in cattle with tremendously developed musculature and strength. Similar effects have been observed in other species, including rodents, dogs and even humans. ACE-031 Builds Skeletal Muscle Treatment with ACE-031 promotes muscle growth by inhibiting ActRIIB signaling.

ACE-031 binds to proteins that signal through the ActRIIB receptor to limit muscle growth. When ACE-031 binds to these proteins, it prevents them from interacting with the ActRIIB receptor, thus allowing muscle to grow. Moreover, because ACE-031 prevents GDF-8 and other proteins that regulate muscle mass from signaling through the ActRIIB receptor, its effects on lean muscle exceed those of inhibitors of GDF-8 (myostatin) alone. When animals are treated with ACE-031, they experience growth in lean muscle and are considerably stronger than their untreated counterparts. This has been shown in several species, and in both healthy animals and in animals with diseases associated with muscle weakness and wasting.

Product Image of ACE 031



The Studies Of ACE 031

Studies with Maximum Muscle Cell Protection

Based on scientific research, it was known that proteins like Myostatin are negative regulators of skeletal muscle growth. These proteins primarily send off the signal in the body via the activin receptor type IIB on skeletal muscles and cause muscle wasting conditions. The fact that the peptide, which is a soluble form of the activin receptor type IIB, acts by binding with Myostatin and reversing its effects, suggests that the peptide may lead to maximum muscle protection and prevent muscle wasting in humans. While this is based on scientific research and facts, clinical studies are yet to be conducted to confirm this hypothesis.

Increased Metabolism and Energy

Scientific research in mice has shown that myostatin not only prevents muscle growth but also negatively affects the energy metabolism in muscles. In simpler words, excessive myostatin leads to increased fatigue and lethargy.

Studies in mice have shown that by blocking the naturally occurring ACE-031 proteins, it promotes increased lactate levels in the serum and causes severe damage to the metabolic energy of the muscles. Hence, when treated with the peptide, it not only prevents muscle growth inhibition by myostatin but also improves the oxidative capacity of the muscles. This way, the energy metabolism of the skeletal muscles increases and causes protection against excessive fatigue and against the negative effects of the radical production.

Studies with Increased Strength

Continuous research by scientists has shown that the function of the peptide is beyond its ability to inhibit myostatin. By preventing oxidative stress in muscles, the peptide also improves the capacity of the muscle tissue to generate a force, and in turn preserve energy and stimulate the muscles toward oxidative respiration.

When the compound was administered in mice, it improved the maximal contractile force in mice by 40% and total contractile force in mice by 25%.

This study demonstrates that while clinical studies are yet to be conducted, the ACE-031 peptide significantly improves muscle strength.

Increased Bone Density

As part of the research , 32 mice were subjected to this study where the mice were divided into two groups and were either administered with placebo or the peptide once a week for 7 weeks.

After the completion of the study, it was observed that the ACE-031 peptide treated mice had increased muscle mass and excessive body weight, along with increased density in bones. Upon further study, it was observed that the increased bone density was not incidental, but was due to enhanced mineralization that boosted bone strength and overall health by almost 30% in the peptide treated mice.

This study suggested that the peptide may be a potential source to treat osteoporosis in humans. The fact that the peptide can not only boost muscle strength and bone density, but also reduce fat deposits in the body, which makes the peptide an interesting candidate.

Studies Suggesting Peptide a Potent Anti-cancer Adjunct

Chemotherapy and anti-cancer drugs are known to lead to increased muscle loss. Science has proven that both these treatments lead to increased muscle cell death and thereby necrosis (a condition characterized by limited blood supply and cellular death).

During a study, it was seen that when ACE-031 peptide was administered in the cell culture induced with anti-cancer medication, it prevented the activation of the signalling pathway that led to muscle loss.

Consequently, there was reduced cellular death. Furthermore, the peptide protected mitochondrial function and boosted muscle energy. Not only this, some forms of cancer forms myostatin in the body which further leads to muscle loss and wasting .

This is why scientists have suggested that clinical trials must be conducted on cancer patients to confirm the biological effects of the peptide. These theories suggest that the peptide can be a potent supplement to be used in conjunction with anti-cancer drugs to reduce (or preferrably eliminate) the negative effects of these medications.

Studies with DMD

Duchenne Muscular Dystrophy (DMD) is a progressive form of serious muscular dystrophy that is a genetic defect that primarily occurs in boys .

