

WORLD'S FIRST  
EQUINE NUTRIGENOMIC  
SUPPLEMENT



# EnerGene-Q10

A source of CoQ10, which increases and maintains a horse's energy levels during peak performance, while facilitating improved recovery after intense exercise  
Scientifically formulated supplement linked to the *Speed Gene* type of a horse



nutrigenomic  
supplement



energy  
booster



source of  
MicroActive® CoQ10



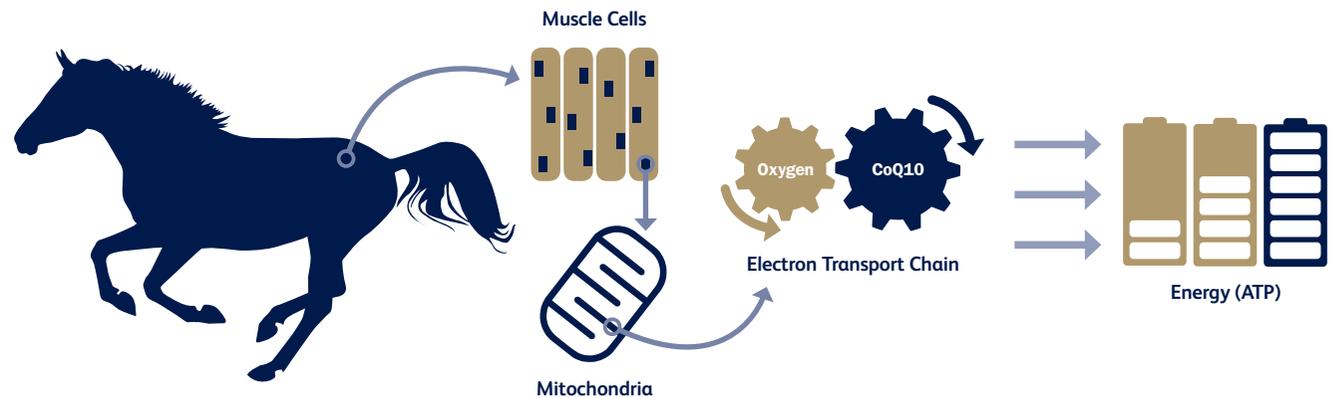
highly  
bioavailable

# EnerGene-Q10

**ENERGENE-Q10** is the world's first nutrigenomic supplement for horses based on published scientific evidence, linking the nutritional requirements of the horse to its genetic make-up.

**ENERGENE-Q10** has been scientifically formulated to contain a highly bioavailable form of the mitochondrial Co-enzyme Q10 (CoQ10) to support more efficient energy production within a horse's muscles. The formulation also contains anti-oxidant properties to aid in delaying fatigue and enhancing recovery following intense exercise.

## How EnerGene-Q10 works



## Is EnerGene-Q10 suited to my horse's genetic type?

A scientific study has shown that **EnerGene-Q10** may be best suited to horses that are used for exercise requiring increased stamina. The best way to assess if **EnerGene-Q10** will be beneficial for your horse is to perform a genetic test. The *Speed Gene Test* categorises a horse as one of three genetic types: **C:C** (suited to sprint exercise), **C:T** (suited to exercise requiring speed and stamina) and **T:T** (suited to exercise requiring stamina). There are more T:T types among National Hunt bred Thoroughbreds than those bred for Flat racing. Also, some breeds of horse are almost all T:T and therefore a genetic test may not be necessary in all cases (e.g. breeds used for Endurance racing and Trotting racing).

The table below lists the approximate percentage of horses that are T:T in different breeds/sports:

Endurance Horse Racing	95%
Trotting Horses	95%
Sport Horse Competition	65%
Thoroughbred National Hunt Racing	60%
Thoroughbred Flat Racing (Europe)	17%
Thoroughbred Flat Racing (Australia)	6%

1

### CoQ10 is a key nutrient for generating energy

**EnerGene-Q10** contains the nutrient Co-enzyme Q10 (CoQ10), which is critical for the production of cellular energy in the form of ATP. CoQ10 is used when energy is generated aerobically, a process that requires oxygen and is a much more efficient pathway than when energy is produced anaerobically, a process that does not require oxygen.

Therefore, any deficiency in CoQ10 may result in a transition to the less efficient anaerobic energy generation cycle. CoQ10 is also a strong anti-oxidant.

[www.plusvital.com](http://www.plusvital.com)

To order a *Speed Gene Test* directly from Plusvital, please call +353 1 2350001 or email [sales@plusvital.com](mailto:sales@plusvital.com)

## 2

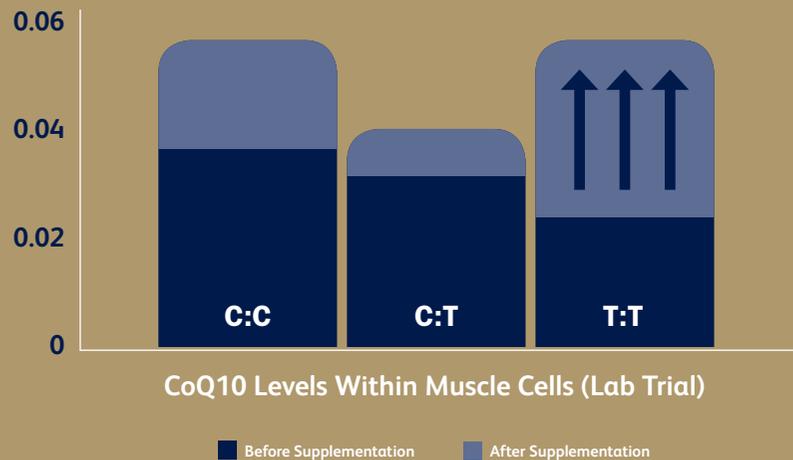
### The cellular level of CoQ10 varies among horses with different Speed Gene types

In horse muscle cells, CoQ10 levels vary among the three genetic types categorised by the *Speed Gene Test*. In a published scientific study\*, it was found that T:T horses (i.e. suited to exercise requiring stamina) had significantly lower cellular levels of CoQ10 than C:C horses (i.e. suited to sprint exercise).

## 3

### Addition of CoQ10 to muscle cells increases CoQ10 levels for T:T horses

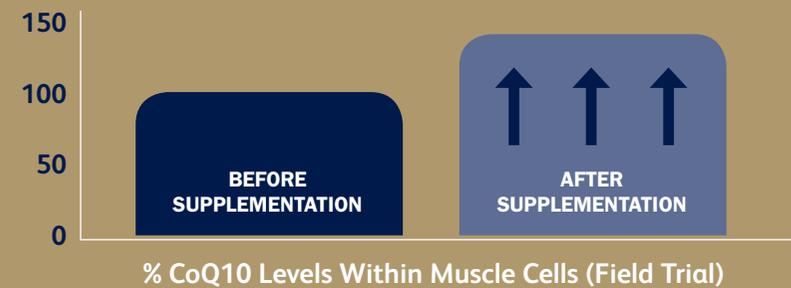
Introducing CoQ10 to muscle cells in the lab restored the cellular level of CoQ10 for the T:T horses to achieve similar levels as C:C horses. This indicates that T:T horses will likely benefit the most from supplementation with CoQ10.



## 4

### Field trials have shown that EnerGene-Q10 delivers CoQ10 to the muscle

A key question in oral supplementation is whether the nutrient reaches the target region in sufficient quantities. In a field trial involving 19 Thoroughbred horses at a leading trainer's yard in Ireland, daily supplementation of **EnerGene-Q10** increased the level of CoQ10 in the muscle ( $P < 0.01$ ). After nine weeks of supplementation the CoQ10 concentration in the muscle increased by 40%.



## 5

### Use EnerGene-Q10 to increase CoQ10 in the muscle

Using **EnerGene-Q10** results in increased levels of CoQ10 in muscle cells, which is particularly important for horses requiring increased aerobic energy production. The potential benefits from an increase in CoQ10 include:

- More efficient energy production
- Delayed onset of fatigue
- Improved response to training
- Enhanced recovery following intense exercise

# Key Ingredients

EnerGene-Q10 includes nutrients such as:



source of  
MicroActive®  
CoQ10

**MicroActive® CoQ10** provides Coenzyme-Q10 (CoQ10) in a form which has been clinically proven to be more available to the body after digestion by the gut. It also provides a slower 24 hour release of CoQ10 which means it will stay at higher levels in the body for longer.



energy  
booster

**Ribose** is a naturally occurring sugar which is one of the building blocks in the body for energy. In the body, energy is transferred around using an “energy molecule” known as ATP. A part of the structure of ATP is ribose.



anti-oxidant

**Anti-Oxidants** are a range of molecules that can prevent “free radicals” from causing tissue damage. When horses metabolise food into energy, the process generates “free radicals”, which are harmful to cells and can lead to issues with growth, cellular regeneration and immunity.



reduces  
free radicals

**Curcumin** is a compound obtained from turmeric. Research has shown that curcumin has a number of beneficial effects in the body. These include functioning as a powerful anti-oxidant, anti-inflammatory and anti-cancer properties. As a result of these properties, it reduces the damage caused by free radicals.



source of  
Selenium

**Organic Selenium (Se)** is an anti-oxidant mineral that plays an important role in reducing free radicals. Complementing Vitamin E, it is an important element in supporting the integrity of cell membranes.



source of  
Vitamin E

**Vitamin E** is the most well-known anti-oxidant for horses and is important for normal function of the muscular, immune and neurologic systems. Vitamin E works in combination with selenium and other anti-oxidants to reduce cellular damage occurring during the process of intense training or in competition.



source of  
Vitamin C

**Vitamin C** has anti-oxidant properties and also works with Vitamin E to reduce free radicals. Normally, it is produced in sufficient quantities in the liver. However, horses under stress from training and competition may have depleted plasma levels of Vitamin C and supplementation may be required to support their immune function.



Available in: 750g tubs

EnerGene-Q10 is suitable for:



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IN IRELAND**