

# AquaSource ColActive3 Colostrum Plus

Designed to provide year-round support for your gut and immune system, AquaSource ColActive3 Colostrum Plus combines Acidophilus and Lactoferrin with nutrient-rich AquaSource Colostrum.

Colostrum is the 'first milk' produced by mothers. It provides an enriched supply of important nutrients and antioxidants, delivering excellent nutrition for those with active lifestyles. As the immune system plays such a vital role in our wellbeing, it is important to ensure that it remains healthy so that we can maintain optimal health, even during stressful times. Various studies have shown that colostrum and its components also provide important benefits for adults.



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## What role does it play in good nutrition?

Colostrum is the pre-milk substance that emerges from mammals following the birth of a newborn. It contains a mixture of immune and growth factors as well as important nutrients and antioxidants, all designed to support the immune system to help ensure health, vitality, and growth. It is a rich source of both essential and non-essential amino acids, as well as essential fats, including phospholipids, which enable colostrum protein protection and easy absorption in the gut.

The most important nutritional components of colostrum are immune factors and growth factors.

## Immune factors

### Proline-Rich Polypeptides (PRPs)

Proline-Rich Polypeptides (PRPs) act systemically, modulating the complex immune system. This makes them, arguably, the most important ingredient in colostrum. They work in a hormonal way that supports the thymus gland (the body's central command for the immune system).

Peptides are short chains of amino acids (the building blocks of proteins) without the complex tertiary structure of proteins.

Proline-Rich Polypeptides (PRPs) are intercellular signalling molecules that have the unique ability to further help and support the immune system. Their name is derived from the fact that they contain an unusually high proportion of the amino acid, proline.

### Lactoferrin

Lactoferrin is an iron-binding protein that helps deprive bacteria of the iron they need to reproduce. It releases iron into the red blood cells, enhancing the oxygenation of tissues.

The major nutritional whey proteins in milk and colostrum are:

$\alpha$  - Lactalbumin

$\beta$  - Lactoglobulin

### Immunoglobulins (IgG, IgA, IgM)

The immunoglobulin fraction in bovine colostrum is composed of approximately 70-80% IgG, 10-15% IgA, 10-15% IgM. Local protection in the form of immune-supplementation with bovine milk antibodies has been shown to be effective in providing local protection to the GI tract.

Comparing functions of immunoglobulins (antibodies):

IgG

Predominant immunoglobulin in bovine milk colostrum.

IgA

Predominant immunoglobulin in human milk and colostrum. Primary role is as first line of defence, good for the mucosal surfaces.

IgM

Primary role as a "first to fight" antibody.

Laboratory analyses of both immune and growth factors from bovine colostrum indicate that they are identical to those found in human colostrum except that the levels of these factors are significantly higher in the bovine version.

As an example, bovine colostrum has been found to be 40 times richer in immune factors than human colostrum. Human colostrum contains 2% of IgG (immunoglobulin G) while bovine colostrum contains 86% of IgG - the most important of the immunoglobulins found in the body.

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## Growth factors

Colostrum contains many growth factors, including insulin-like growth factor-1 and 2 (IGF-1 and IGF-2), Epithelial growth factor (EGF), Fibroblast growth factor (FGF), Platelet-derived growth factor (PDGF), and Transforming growth factors alpha  $\beta$  (TGA- $\alpha$  and TGF- $\beta$ ).

Growth factors are peptides that function as intercellular signalling molecules to turn on or turn off the production of specific proteins in the target cells. Their presence in colostrum is primarily to complete the growth and development of the newborn gut. In adults, they can help to support a healthy gut wall.

## Other nutritional components

Colostrum is a combination of vitamins, minerals, amino acids and essential oils that are naturally occurring in a near perfect combination.

Vitamins A, B1, B2, B6, B12, and E are found in small amounts, while traces of all other vitamins, as well as minerals such as calcium, sodium, magnesium and zinc, are also present in colostrum.



Gluten Free



GMO Free

## Cytokines

Cytokines are small proteins that are secreted by specific cells of the immune system. They are a category of signalling molecules, used extensively in cellular communication, namely: proteins, peptides and glycoproteins.

## Lysozymes

Lysozymes can help support the immune system. The enzymes lactoperidase, thiocyanate, peroxidase and xanthine oxidase, oxidize bacteria through their ability to release hydrogen peroxide.

## Glycoproteins

Glycoproteins are a digestive factor that has been shown to help immune and growth factors survive the passage through the highly acidic digestive system.

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## Made with care

AquaSource ColActive3 Colostrum Plus is produced using bovine colostrum. Bovine colostrum is most commonly used as a nutritional supplement. From a practical perspective, dairy farming, including the production of cow's milk and dairy products, is well established. Sophisticated and highly controlled production processes and facilities mean that bovine colostrum can be efficiently produced under proven, strict quality standards.

AquaSource ColActive3 Colostrum Plus utilises the whole colostrum with no fat removal and no ultra-filtration process.

Our colostrum is sourced from the Southwest of the US where a state-of-the-art processing facility has been designed by dairy process engineers for the sole purpose of producing the best quality colostrum. The colostrum is collected, processed and flash pasteurised at 72°C for 15 seconds. It is finally dried with a low, indirect heat. This process helps maintain as much nutritional value as possible.

## Why bovine colostrum?

- ✓ Contains 10-20 times more nutritional factors than human colostrum
- ✓ Easily digested and metabolised
- ✓ Ethically sourced from happy cows
- ✓ Sustainable/good availability
- ✓ Strict quality standards

Two other important ingredients are added to AquaSource ColActive 3 Colostrum Plus to help support your gut health and immune system:

## Acidophilus

Friendly bacteria native to the small intestines that aid in digestion. Acidophilus can help protect the body against harmful bacteria, parasites, and other organisms.

## Lactoferrin

Although already naturally present in colostrum, this bioactive peptide is also added as a stand-alone ingredient to further support the immune system.

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## Summary

Combining Acidophilus and Lactoferrin with nutrient-rich AquaSource Colostrum, ColActive3 Colostrum Plus is a useful addition to any nutrition regime. It is designed to help support the lower digestive tract and immune system, providing excellent nutritional support for athletes and those with very active lifestyles.



## Key advantages

- ✔ Nutrition and antibodies in a concentrated form.
- ✔ Supports maintenance of overall good health.
- ✔ Good immune function support.
- ✔ Includes Acidophilus and Lactoferrin for additional gut support.
- ✔ Certified processed from healthy, pasture-fed dairy cows.
- ✔ Free of pesticides, hormones, antibiotics and BSE.
- ✔ Supplied in true-filled capsules (no binders or fillers).
- ✔ Utilises whole colostrum - no ultra filtration process.
- ✔ Gluten and GMO free.

Contains **MILK** and **LACTOFERRIN** as allergens as per EU Food Information for Consumers Regulation No. 1169/2011.

For full nutritional information on all AquaSource products (ingredients, directions, allergens and any warnings, if applicable), please see our website [www.aquasource.net](http://www.aquasource.net)

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