

Colostrum Specific™ Colostrum Prime Life™ Lactoferrin



Colostrums

- From First Milk Only - Within the First 12 Hours
- Freeze Dried Only - Never Spray Dried
- Verified by the Presence of Antibodies, Transfer Factors and Nerve Growth Factors

Lactoferrin

- Promotes the Growth of Bifidobacterium
- Enhances Natural Killer Cell and Neutrophil Activity
- Colostrum and Lactoferrin Help Maintain Proper Low Yeast Levels in the Body

Only the Best

Jarrow FORMULAS® Colostrum products are collected from cows that are pasture-fed, except in the winter, are free of antibiotics and hormones, and are USDA certified for colostrum import.

Colostrum Prime Life contains a minimum of 35% immunoglobulins (IgGs), which is 1/3 higher than typical colostrum products. It is rich in lactoferrin, and freeze-dried to maintain potency and quality. **120 capsules of 500 mg each.**



Colostrum Specific is freeze-dried colostrum. The enteric coated capsules protect the special colostrum proteins from digestion by the stomach. **60 capsules of 500 mg each.**



Lactoferrin is freeze-dried, low-iron glycoprotein from whey. Lactoferrin benefits intestinal health by promoting the growth of *lactobacilli* and *bifidobacteria*. **60 capsules each containing 250 mg of lactoferrin.**



Usage

Colostrum Prime Life and **Colostrum Specific** are usually supplemented at two to four capsules per day taken between meals. **Lactoferrin** is taken at the rate of one to two capsules per day with food.

Superior Nutrition and FormulationSM by
Jarrow FORMULAS®
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* These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.

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An especially interesting discovery is that lactoferrin becomes much more active as a bactericidal *after* it has been digested by pepsin and acid proteases in the stomach. The peptide lactoferrin B is liberated from the larger lactoferrin molecule. Lactoferrin B, like lactoferrin, plays a role in supporting the immune system. *In vitro* tests confirm lactoferrin's extremely strong activity against both gram-negative and gram-positive bacteria, and *Candida albicans*. In other words, exposure to digestion in the stomach possibly increases the potency of lactoferrin via the liberation of lactoferrin B. Lactoferrin has been shown to be active in both *in vitro* and *in vivo* tests against a large number of pathogens. Lactoferrin has a specific binding capacity for *Escherichia coli* (*E. coli*) bacteria such as are often found in human intestinal infections. In contrast to its negative impact upon pathogens, lactoferrin does not affect the probiotic bacteria (good bacteria) *Lactobacillus*, a beneficial bacteria; it actually may promote the growth of *Bifidobacteria*, which is found in the large intestine.

Lactoferrin, The Natural Bactericide Found in Colostrum

cells (T-lymphocytes), as opposed to the immunity based on the B-cells, which produce antibodies. Whereas the B-cells are very short-lived, the T (thymus-derived) immune cells are involved in immune reactions which can continue for months or even years. Colostrum stimulates cell-mediated immunity.

The Issue of Processing

Jarrow FORMULAS® Colostrum is collected from healthy cows grazed on pasture (except in winter). Herds grazed on pasture are exposed to a variety of organisms and thereby develop a more comprehensive immune response.

Immunoglobulins themselves are quite fragile and therefore need proper handling and processing. Two factors involving this collection and processing of colostrum determine the value of colostrum supplements. First, true colostrum can only be collected within 12 hours of calving for maximum activity. Second, only freeze-drying ensures that the different colostrum immunoglobulin fractions and growth factors retain their biological activity and are not denatured. Many manufacturers utilize spray drying, but spray drying substantially denatures colostrum. **Jarrow FORMULAS®** colostrum products are freeze-dried, being frozen and dehydrated in a vacuum without heat.

Colostrum Prime Life™ and **Colostrum Specific™** adhere to these standards, producing two very beneficial dietary supplements. Moreover, both products are tested for immunoglobulin levels, nerve growth factor and transfer factor *after collection* to ensure that every bottle is genuine colostrum.

Colostrum Specific™ is freeze-dried bovine colostrum in enteric-coated capsules for specific delivery to the intestines. The enteric coating prevents degradation as the colostrum passes through the stomach.

Immunoglobulin Factors

Newborn babies have weak, underdeveloped immune responses. They must rely upon a gift from their mothers during their first weeks of life - colostrum, which is the special first milk - for protection against bacteria, viruses and fungi. Colostrum is a source of immunoglobulins, which supply passive immunity to newborns as a defense against infections. Considerable evidence points to immunoglobulins also being active against infectious diarrhea caused by enteric bacteria and against *Candida albicans*. In fact, colostrum is so important to newborn calves that, if they do not receive it, most of these calves will die within three months of birth.

These immunoglobulins (Ig) consist of structurally related proteins, also called gammaglobulins, all of which act as antibodies. These components of the immune system include IgA, IgE, IgG, etc., each of which is itself a "family" of more closely related proteins. In the newborn, immunoglobulins supply "passive immunity", meaning that the mother's immune response to pathogens, a response developed from her own exposure, is made available to the baby through the colostrum in her milk. Colostrum provides at least two more benefits to the immune system: "transfer factor" and lactoferrin. Transfer factor (TF) refers to a form of RNA (ribonucleic acid) which "transfers" the coding for cell-mediated immunity, meaning the immunity which depends upon T-

**Colostrum Specific™
Colostrum Prime Life™
Lactoferrin**

Supplements to Support the Immune System

Why Colostrum, the "First Milk", is So Important