

## Ther-Biotic® Complete

Broad-spectrum synergistic multispecies probiotic formula

### Introduction

Ther-Biotic® Complete is a broad-spectrum, high-CFU, multispecies probiotic supplement containing 12 probiotic microbial species each selected for well-documented supportive health benefits. A synergistic blend of health-promoting *Lactobacillus* and *Bifidobacterium* species together with *Streptococcus thermophilus* formulated with InTactic® acid-stable technology, Ther-Biotic® Complete supplies essential intestinal microorganisms to support a more favorable balance of intestinal microbiota and healthy gastrointestinal (GI) and immune function.†

### Product features

- The probiotic species in Ther-Biotic® Complete are supplied in a base of inulin derived from chicory root and encapsulated in a Kosher-certified vegetarian capsule.
- InTactic® acid-stable delivery technology, a proprietary hypoallergenic polysaccharide complex from seaweed, protects microorganisms during transit through the acidic gastric environment.†
- Hypoallergenic product free of the following common allergens: milk/casein, eggs, fish, shellfish, tree nuts, peanuts, wheat, gluten, and soybeans. Contains no artificial colors, flavors, preservatives, sugar, or salicylates are used.

### Background

Probiotics are living microorganisms that when consumed in adequate amounts have beneficial effects on the health of their host.<sup>1†</sup> Probiotics promote a more favorable balance of intestinal microbiota by competing with populations of less desirable microorganisms,<sup>2</sup> by producing lactic acid, acetic acid, formic acid, hydrogen peroxide, and bacteriocins.<sup>1</sup> Probiotics compete with these less favorable organisms for nutrients and inhibit binding of less desirable species to enteric mucosal cells.<sup>3-5</sup> Probiotic bacteria support innate and adaptive immune responses by modulating circulating lymphocytes, antigen-specific antibodies, phagocytes, and natural killer (NK) cells.<sup>15,6</sup> Probiotics and commensal bacteria ferment sugars, digestible and non-digestible carbohydrates, and amino acids into formate, lactate, and the short-chain fatty acids (SCFAs) acetate, propionate, and butyrate.<sup>17-9</sup> The proteolytic enzymes secreted by probiotics support digestion by metabolizing dietary proteins, including gluten and casein.<sup>10,11</sup> Probiotics also synthesize vitamin K, folates, thiamin, biotin, and vitamin B<sub>12</sub>.<sup>112</sup>

### How Ther-Biotic® Complete works

Lactobacilli are the predominant microbial genus in the upper GI tract,<sup>13</sup> and comprise less than 1% of the microbiota in the colon and feces.<sup>14,15</sup> Most Lactobacilli used as probiotics are not indigenous to the human GI tract, but only colonize the intestines when regularly consumed.<sup>16</sup> The consumption of *Lactobacillus*-containing foods or probiotics significantly affects the number of lactobacilli in the small intestine.<sup>116,17</sup> Vegetarians and people consuming traditional plant-based diets have high numbers of *L. plantarum*, *L. rhamnosus*, and *L. acidophilus*. Colonization rates with these important microorganisms are lower in individuals consuming a standard Western diet of more highly processed foods.<sup>17,18</sup> Lactobacilli metabolize proteins and carbohydrates,<sup>19,20</sup> hydrolyze bile salts,<sup>21</sup> antagonize disadvantageous microbes,<sup>22</sup> enhance innate and acquired immunity,<sup>23,24</sup> and beneficially modulate cytokines.<sup>125</sup>

Bifidobacteria colonize the GI tract of newborns within days of birth and play a pivotal role in the development of the GI and immune systems.<sup>26,27</sup> They are a predominant genus of the infant gut microbiota and profoundly affect the physiology and immunology of the infant host.<sup>28,29</sup> The species most frequently isolated from infants are *B. longum*, *B. bifidum*, and *B. breve*.<sup>23</sup> Bifidobacteria are highly adapted to the colonic environment and possess numerous properties that facilitate their own colonization.<sup>30,31</sup> *Bifidobacterium* species metabolize carbohydrates that cannot be digested by the host or by microorganisms in the upper GI tract.<sup>132,33</sup> They convert dietary fiber to acetate which helps support the growth of commensal butyrate-producing species through cross-feeding.<sup>134,35</sup> They modulate intestinal epithelial inflammation metabolism<sup>36</sup> and colonization by less desirable species.<sup>131,34</sup> Bifidobacteria numbers significantly decline with age and antibiotic use.<sup>37-40</sup>

Transient microorganisms do not colonize the GI tract, but instead exert beneficial functions as they pass through. Two of the best recognized transient bacteria with a very long history of use are *Streptococcus thermophilus* and *Lactobacillus bulgaricus*. These 2 species metabolize lactose, improving lactose intolerance, and produce a variety of fermentation end-products.<sup>141</sup> They also appear to display synergistic cooperation.<sup>142</sup>

†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.

## Conclusion

Ther-Biotic® Complete is indicated as a foundation to support GI health by contributing to a balanced, healthful intestinal microbiota.<sup>†</sup> Anyone who is not consuming a diet rich in probiotics, such as are found in fresh fruits/vegetables and fermented foods, could benefit from Ther-Biotic® Complete. People with gut dysbiosis may benefit from the probiotic support offered by Ther-Biotic® Complete.<sup>†</sup> It may be used in conjunction with medications known to adversely affect the intestinal microbiota, such as antibiotics.

## Formula

### CAPSULES

Supplement Facts	
Serving Size 1 Capsule	
Amount Per Capsule	
Probiotic Blend (25 billion CFU) in a base of inulin (derived from chicory root)	280 mg*
<i>Lactobacillus rhamnosus</i>	6.0 billion CFU*
<i>Bifidobacterium bifidum</i>	5.0 billion CFU*
<i>Lactobacillus acidophilus</i>	3.0 billion CFU*
<i>Lactobacillus casei</i>	2.5 billion CFU*
<i>Lactobacillus plantarum</i>	2.0 billion CFU*
<i>Lactobacillus salivarius</i>	2.0 billion CFU*
<i>Bifidobacterium longum</i>	1.0 billion CFU*
<i>Streptococcus thermophilus</i>	1.0 billion CFU*
<i>Lactobacillus bulgaricus</i>	1.0 billion CFU*
<i>Lactobacillus paracasei</i>	0.5 billion CFU*
<i>Bifidobacterium lactis</i>	0.5 billion CFU*
<i>Bifidobacterium breve</i>	0.5 billion CFU*

\*Daily Value not established.  
Other ingredients: Vegetarian capsule (hydroxypropyl methylcellulose, water), InTactic® proprietary polysaccharide complex, and L-leucine.

V775-06 60 vegetarian capsules  
V775-12 120 vegetarian capsules

### POWDER

Supplement Facts	
Serving Size 1/4 Teaspoon (Approx. 1 g)	
Servings Per Container 60	
Amount Per 1/4 Teaspoon	
Probiotic Blend (100 billion CFU) in a base of inulin (derived from chicory root) and InTactic® proprietary polysaccharide complex	1 g*
<i>Lactobacillus rhamnosus</i>	24.0 billion CFU*
<i>Bifidobacterium bifidum</i>	20.0 billion CFU*
<i>Lactobacillus acidophilus</i>	12.0 billion CFU*
<i>Lactobacillus casei</i>	10.0 billion CFU*
<i>Lactobacillus plantarum</i>	8.0 billion CFU*
<i>Lactobacillus salivarius</i>	8.0 billion CFU*
<i>Bifidobacterium longum</i>	4.0 billion CFU*
<i>Streptococcus thermophilus</i>	4.0 billion CFU*
<i>Lactobacillus bulgaricus</i>	4.0 billion CFU*
<i>Lactobacillus paracasei</i>	2.0 billion CFU*
<i>Bifidobacterium lactis</i>	2.0 billion CFU*
<i>Bifidobacterium breve</i>	2.0 billion CFU*

\*Daily Value not established.  
Other ingredients: None.

K-TCP 2.25 oz. (64 grams) powder



## Suggested use

**Capsules: Adults:** 1 capsule daily with food or as directed by a healthcare professional. **Children:** As directed by a healthcare professional.  
**Powder: Adults:** 1/4 teaspoon daily with food or as directed by a healthcare professional. **Children:** As directed by a healthcare professional.  
**Caution:** If you are pregnant, nursing, have a medical condition, or taking prescription drugs, consult your healthcare professional before using this product. Keep out of reach of children.

## How supplied

**Capsule:** 60 or 120 vegetarian capsules per bottle. **Powder:** Powder net weight 2.25 ounces (64 grams) per bottle.

## Storage

Keep refrigerated with the lid tightly shut to minimize entry of moisture into the bottle. Ther-Biotic® Complete is shipped with temperature-control packs to minimize exposure to high temperatures during transit.

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SUPPORTS GI AND  
IMMUNE HEALTH



# Ther-Biotic® Children's Chewable

High-CFU, multispecies chewable probiotic

Ther-Biotic® Children's Chewable is a broad-spectrum, hypoallergenic probiotic supplement designed for children 2 years of age and older. The convenient, naturally flavored chewable tablets deliver potent amounts of 4 *Lactobacillus* and 4 *Bifidobacterium* species that benefit gastrointestinal and immune health in children.

## Supports gastrointestinal health†

Digestive discomforts are common among children and include occasional constipation, loose stools, gas, bloating, and stomach upset. The 8 probiotic species in Ther-Biotic® Children's Chewable work together to help facilitate intestinal motility, support healthy cytokine balance in the gut, and support secretion of digestive enzymes that break down food components. They also help favorably shift the balance of gut microbiota towards more beneficial species by directly competing for nutrients and adhesion sites, secreting substances such as organic acids, bacteriocins and hydrogen peroxide, and stimulating the body's own healthy immune responses.

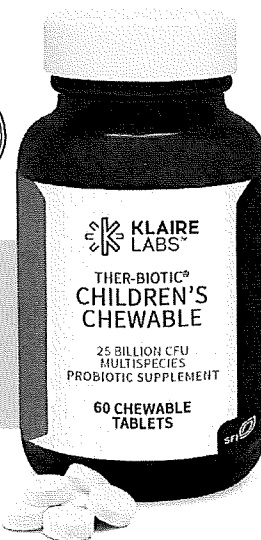
## Supports normal maturation of a child's immune system†

Normal maturation of the immune system is highly dependent upon development of a healthy intestinal microbiota. However, children's immune systems are continuously challenged by their environment, allergens and irritants in foods, chemical toxins, and overuse of medications such as antibiotics that can easily disrupt the balance of the gut microbiota. The substantial amounts of *Lactobacillus* and *Bifidobacterium* in this formula support a normal microbiota as well as augment multiple aspects of immune function including antibody production and leukocyte phagocytic activity.†

## Promotes immunotolerance†

Ther-Biotic® Children's Chewable supplies *Lactobacillus* and *Bifidobacterium* species critical for healthy development of a child's immune system.† The specific probiotics included also offer benefit for normal immune system function by supporting both innate and acquired immunity, healthy cytokine balance, and gastrointestinal immune responsiveness.†

- Suitable for children over age 2, or even adults
- Supplies 25 billion CFU per tablet
- Great tasting, natural cherry flavor



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# Ther-Biotic® Children's Chewable

High-CFU, multispecies chewable probiotic

## Indications

Ther-Biotic® Children's Chewable is designed to support a healthy intestinal microbiota in children aged 2 and older.<sup>1</sup> Children with gastrointestinal discomforts such as occasional constipation, loose stools, or abdominal pain, or those taking medications that affect the intestinal microbiota (such as antibiotics) may benefit the most from this formula. Ther-Biotic® Children's Chewable is also recommended for children to support healthy intestinal permeability, skin health, and immune function.<sup>1</sup>

## Formula

### Supplement Facts

Serving Size 1 Chewable Tablet

#### Amount Per Tablet

Probiotic Blend (25 billion CFU)	224 mg*
in a base of inulin (derived from chicory root)	
<i>Lactobacillus</i> species	17 billion CFU*
<i>Lactobacillus rhamnosus</i>	
<i>Lactobacillus casei</i>	
<i>Lactobacillus salivarius</i>	
<i>Lactobacillus paracasei</i>	
<i>Bifidobacterium</i> species	8 billion CFU*
<i>Bifidobacterium infantis</i>	
<i>Bifidobacterium bifidum</i>	
<i>Bifidobacterium longum</i>	
<i>Bifidobacterium breve</i>	

\*Daily Value not established.

Other ingredients: Xylitol, natural cherry flavor, natural vanilla flavor, silicon dioxide, stearic acid, magnesium stearate, and natural licorice extract.

K-TCC 60 chewable tablets

## Suggested use

**For children 2 years of age and older:** Chew 1 tablet daily preferably 30 to 60 minutes following a meal or as directed by a healthcare professional. Not recommended for children less than 2 years of age. **Caution:** If you are pregnant, nursing, have a medical condition, or taking prescription drugs, consult your healthcare professional before using this product. Keep out of reach of children.

## Contraindications

Individuals sensitive to chicory root (inulin source) may wish to avoid use of this product.

## Product supply

60 chewable tablets per bottle.

<sup>1</sup>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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