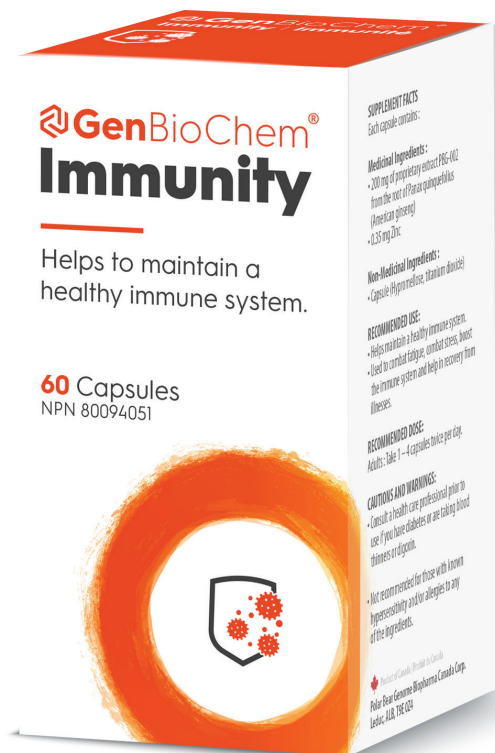


# GenBioChem<sup>®</sup> Immunity

GenBioChem<sup>®</sup> Immunity is used in Herbal Medicine as an adaptogen to help maintain a healthy immune system.

NPN: 80094051



## Supplement Facts

Each capsule contains:

### Medicinal Ingredients:

- 200 mg of proprietary 5:1 extract PBG-002 from the root of Panax quinquefolius (American ginseng)
- 0.35 mg zinc acetate

### Non-Medicinal Ingredients:

- Capsule (Hypromellose, titanium dioxide)

### Recommended Use or Purpose:

- Helps maintain a healthy immune system
- Helps to maintain immune function
- Helps to prevent zinc deficiency

### Recommended Dose:

- Adults: Take 1-2 capsules 2-6 times per day. Take a few hours before or after taking other medications. Take with food.

### Cautions and Warnings:

- Consult a health care professional prior to use if you have diabetes or are taking blood thinners or digoxin.
- Not recommended for those with known hypersensitivity and/or allergies to any of the ingredients.

### Target Populations:

- People with a weakened immune system due to poor health or age
- People susceptible to flu and other infections
- People recovering from a long-term and/or serious illness
- People who experience chronic physical and mental stress and lack of sleep
- People undergoing intensive exercise regimen or athletic training
- People who want to maintain a healthy immune system



Pharmaceutically Standardized using  
GenBioChem<sup>®</sup> Triple Fingerprinting  
Technology

Our proprietary ginseng extract is derived from the matured root of **North American ginseng** (>4 years). Many products in the market use nonmedicinal parts of the ginseng plant, such as leaves, or less efficacious parts such as the non-matured root. Please read label carefully before purchasing ginseng-based natural health products to ensure you are getting an effective product.

## Our Unique Platform Technology

Our scientific and medical team have developed a breakthrough proprietary technology platform, GenBioChem<sup>®</sup> Triple Fingerprinting Technology™. Several cutting-edge analytic and biomedical technologies are involved in this technology platform:

**1. Chemical Fingerprinting:** Through the use of advanced analytical methods and instruments, Chemical Fingerprinting reveals the active phytochemical ingredients, clarifying the identity, authenticity and purity of each product.

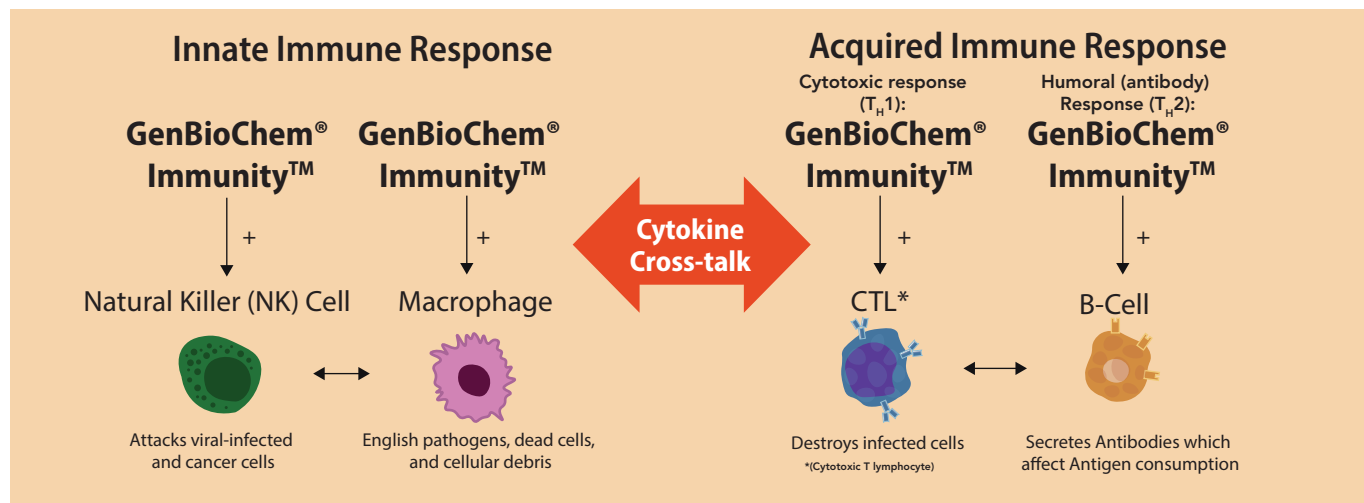
**2. Biological and Genomic Fingerprinting:** Both these techniques reveal the targeted health benefit of our products when tested for their biological/pharmacological effects and targeted genomic (mRNA) profiles relevant to health status. Our GenBioChem<sup>®</sup> Triple Fingerprinting Technology ensures quality, authenticity and purity throughout our entire production cycle from lab to shelf.

**GenBioChem® Immunity significantly enhances innate and acquired immune responses safely and effectively.**

The immune system is a collection of structures, tissues, immune cells, antibodies, cytokines and physiology processes within the body. Immune function is the body's defense against infectious organisms, cancer cells and other invaders. Through a series of steps called the immune response, the immune system attacks organisms and substances that invade body systems and cause disease.

PBG-002 is a proprietary formulation developed by our scientific team led by Dr. Jacqueline Shan. The active ingredient PBG-002 activates both the innate (rapid, non-specific) and adaptive (delayed responses with antigen specificity and immunological memory) immune response. An important aspect of its unique mechanism of action is its ability to enhance TH1 (cell-mediated immunity), indicating that PBG-002 does not specifically target one form of pathogens such as viruses, bacteria and cancer cells, but a wide spectrum of external and internal pathogens.

**GenBioChem® Immunity significantly enhances innate and acquired immune responses safely and effectively.**



**NK Cell**



In the presence of a virus:

- Increases number of Natural Killer (NK) Cells
- Activates NK cells to secrete interferon- $\gamma$  (IFN- $\gamma$ )

**B Cell**



- Increases proliferation of B-lymphocytes
- Increases Antibody immunoglobulin (IgG) production
- Increase lymphocyte release of Interleukin-2 (IL-2) and IFN- $\gamma$

**Macrophage**



- Increases proportion of Monocytes (Macrophage precursors) in the blood
- Increases Macrophage release of Cytokines: Interleukin-1 (IL-1) Interleukin-6 (IL-6), Tumor Necrosis Factor- $\alpha$  (TNF- $\alpha$ ), and Nitric Oxide (NO).

**Our Company:**

GenBioChem® Immunity is developed and manufactured by Polar Bear Genome BioPharma Canada Corp (PBG BioPharma). PBG BioPharma is a vertically integrated biopharmaceutical Canadian company based in Alberta and Ontario. We are committed to becoming a world leader in the development and manufacturing of evidence-based natural health products using our proprietary GenBioChem® Triple Fingerprinting Technology.

**Our Founder and Chief Scientist:**

Dr. Jacqueline Shan is an award-winning international scientist and business leader and the creator of the #1 selling colds and flu product in Canada, COLD-fx®. She leads a team of scientists and medical professionals in Canada and around the world to research and develop innovative biotechnologies and biomedical products.