



# **Immunopropophyt**

100% Natural Medicine to Enhance Immune System

**Suitable for Equine** 

**Oral solution** 

# **Ingredients:**

- Propolis Extract
- Echinacea purpurea Extract
- Licorice Extract

Considering the high costs of treating diseases and their negative consequences on health, prevention is always preferable to treatment. The immune system plays the main role in the prevention of diseases and the optimal performance of the animal. A strong immune system provides an adequate defense against pathogens and a stronger response to vaccines. Immune deficiency in horses can occur for a variety of reasons including immunosuppressive treatments (such as steroid therapy), stress, viral diseases, tumors, metabolic/endocrine diseases, aging, autoimmunity, and malnutrition and is accompanied with recurrent infections and fever. On the other hand, exercise, immune system and susceptibility to diseases have a complex and close relationship. Immune suppression caused by exercise and long-term activity in horses can lead to an increase in the incidence and severity of diseases, so enhancing the immune system in these animals will be necessary.



## Mechanism of action:

Propolis is a sticky resinous substance produced by worker bees and its duty is protecting the hive, preventing the entry of invaders and preventing the growth of bacteria, viruses and fungi. Propolis is commonly used to improve the health of the immune and respiratory systems. Propolis contains flavonoid compounds, aromatic and aliphatic acids, terpenoids, fatty acids, amino acids, polysaccharides, vitamins (B-complex vitamins, vitamin E and pre-vitamin A) and various minerals (such as calcium, iron, zinc, silica, potassium, copper and magnesium). Some of the most important benefits of propolis are antibacterial, antiviral, antifungal, anti-parasitic, anti-inflammatory, antioxidant and anti-cancer properties. Due to its rich content of flavonoids, phenolic acids and terpenoids, propolis stimulates the cellular and humoral immune system by stimulating the proliferation of peripheral lymphocytes and increasing the secretion of antibodies, stimulating T lymphocytes and increasing the phagocytosis percentage, and as a result, it enhances the immune responses against pathogens. Propolis also promotes faster muscle growth.

Echinacea plant has antibacterial, antiviral, anti-inflammatory, antioxidant properties and regulates the function of the immune system. The most important compounds of this plant are classified as alkamides, phenolic compounds, glycoproteins and polysaccharides. Echinacea stimulates the immune response against pathogens by activating macrophages, polymorphonuclear leukocytes and natural killer cells (NK-cells) and increasing phagocytosis. Arabinogalactan which is present in this plant stimulates and regulates the function of the complement system. Also, Echinacea extract acts as a hematinic agent and increases the synthesis of hemoglobin and thus increases the number of red blood cells, and by this way plays a significant role in enhancing the immune system and other organs.

Licorice plant extract contains various compounds including triterpenoid saponins, flavonoids, isoflavones, coumarins, various amino acids and polysaccharides. Its main saponin compounds are glycyrrhizic acid and glycyrrhizin. Triterpenoids and other compounds, including flavonoids, in licorice extract have antioxidant properties and reduce oxidative stress caused by physical (competitions) and chemical factors (aflatoxins in feed, etc.) and as a result, they improve blood biochemical indicators and organ function. Glycyrrhizin causes the secretion of cytokines involved in the development of T lymphocytes and plays an effective role in creating cellular immune responses. Also, glycyrrhizic acid strengthens the immune system against bacterial and viral agents by stimulating the secretion of antibodies and gamma interferon. Licorice prevents and heals gastrointestinal ulcers by increasing mucus secretion as well as its anti-pepsin activity.

By using the properties of these natural extracts, Immunopropophyte enhances cellular and humoral immunity and leads to an increase in the body's resistance to diseases and also accelerates the healing process of diseases.



# **Immunopropophyt Indications:**

- In cases of long-term excercises
- Improving performance in cases of autoimmune diseases such as aplastic anemia
- Prevention of immunodeficiency caused by some treatments (such as steroid therapy)
- Improving the function of the immune system in response to vaccination
- Enhancing the immune system against pathogens (viral, bacterial, fungal, etc.)
- Preventing bacterial and viral infections
- Controlling the spread of viral diseases by reducing virus shedding
- Improving gastrointestinal inflammations and ulcers caused by infectious diseases and taking non-steroidal antiinflammatory drugs (NSAIDs)
- Improving bronchial inflammations and secretions
- Reducing the mortality rate





## **Recommended dosage:**

250 ml per 5000 kg of body weight

# **Storage Conditions:**

Store in a cool and dry place at 25°C and away from direct sunlight.

# **Drug Interaction:**

Compatible with all kinds of commonly used medicines, additives and vaccines.

#### **Cautions:**

Keep out of reach of children

In case of accidental eye contact, wash immediately with plenty of water

# Packaging:

250 ml bottles

# **Expiration Date:**

24 months from production date





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