



Small Animal Antioxidant

The gold standard in antioxidant support for dogs and cats

Reformulated in 2020 to increase Vitamin C to 100 mg per soft chew

Comprehensive Antioxidant Support

Free radicals (such as superoxide and hydrogen peroxide) damage cells, proteins, fats, and DNA. In a process called “oxidative stress,” negatively charged free radicals steal electrons from nearby cellular structures, a change that dramatically and adversely alters the cell’s structure or function. **Small Animal Antioxidant**, by preventing or mitigating oxidative stress, helps maintain the structure and function of the eyes, heart, blood vessels, liver, lungs, bones, and skin, as well as the neurological and immune systems. This formula is ideal for the pet who needs extra antioxidant support, such as highly active dogs, geriatric pets, and companion animals who live in a particularly toxic environment, such as a large city. Because of its broad range of antioxidant ingredients, **Small Animal Antioxidant** provides comprehensive antioxidant support for multiple organs and tissues in the body. And by minimizing oxidative stress in these organs and tissues, the harmful inflammatory processes that lead to chronic health conditions are minimized as well.

Key Nutritional Support Features:

- | Seven plant-based antioxidants – powerful natural substances that neutralize free radicals or reduce their production
- | The body’s “master” antioxidant – the tri-peptide Glutathione – and the three amino acids used by the body to make it
- | Two powerfully active vitamins – Vitamin C and Vitamin E – and one pro-vitamin – Beta Carotene – to achieve water-soluble and fat-soluble antioxidant activity

Small Animal Antioxidant – Special Nutrients

Small Animal Antioxidant is designed for dogs and cats with an increased oxidative burden who need a supplement with maximum antioxidant potential. This ThorneVet formula provides the benefit of powerful antioxidants not normally found in the basic “A, C, E” antioxidant supplements on the market. The beneficial effects of **Small Animal Antioxidant** are due to the ability of its ingredients to first, neutralize free radicals directly, and second, to indirectly enhance the animal’s own natural antioxidant system. In doing so, **Small Animal Antioxidant** provides significant protective effects for multiple organs and tissues, especially in the liver.

Seven Plant-Based Antioxidants

Research shows that **Curcumin** protects the liver from environmental toxins. Although **Curcumin’s** liver-protective effect is due in part to directly neutralizing free radicals, **Curcumin** also enhances the body’s natural antioxidant system by helping to increase the level of **Glutathione** in the liver, thereby aiding the liver’s detoxification processes. **Curcumin** is provided as a highly absorbable **phytosome complex**.

Silymarin, the most active component in **Milk Thistle Extract**, has been shown in clinical studies to protect liver cells from damage caused by free radicals produced when the liver metabolizes toxic substances. **Silymarin** also helps maintain an optimal level in the liver of the powerful antioxidant **Glutathione**.

The most active constituents of **Grape Seed Extract** are **Oligomeric Proanthocyanidins (OPCs)**. Although the free-radical neutralizing ability of OPCs inhibits oxidative damage throughout the body, **OPCs** are especially protective against oxidative damage in the linings of the arteries, veins, and capillaries.

Hesperiden is a bioflavonoid derived from citrus fruit. **Hesperiden Methyl Chalcone**, or **HMC**, is the methylated form of **Hesperidin**, which makes **HMC** highly water-soluble and therefore readily absorbed by the body. Research shows **HMC** has a powerful antioxidant effect that reduces the generation of free radicals. For example, studies show **HMC** benefits skin health by reducing the oxidative process linked to ultraviolet B radiation from the sun. **HMC** also has synergistic antioxidant activity with **Vitamin C**.

Resveratrol, a polyphenol derived from the skins and seeds of grapes and berries, has potent antioxidant activity. It is thought that **Resveratrol** neutralizes free radicals by enhancing the formation of antioxidant enzymes, like superoxide dismutase and glutathione peroxidase. In addition, animal studies show that **Resveratrol** inhibits the formation of new free radicals and slows down the otherwise natural decrease caused by aging of antioxidant enzymes.

Quercetin, the most well-researched of the various plant-based flavonoids, has been shown in animal studies to provide beneficial antioxidant support and to inhibit the production of inflammatory cytokines. **Quercetin** is provided as a highly absorbable **phytosome complex**.

Sulforaphane Glucosinolate (SGS) is an antioxidant constituent of **Broccoli Seed Extract**. **SGS** is an “indirect” antioxidant – which is different than antioxidants like **Vitamin C**, **Vitamin E**, and **Beta-Carotene** which work “directly” to neutralize free radicals. When **Broccoli Seed Extract** is ingested and begins to break down in the gut, it releases **SGS**, which increases the body’s production of a key protein – NRF2 – that up-regulates the activity of a variety of antioxidant enzymes, which in turn accelerates the body’s natural antioxidant response. Thirty milligrams of **Broccoli Seed Extract** are included in each soft chew to supply five milligrams of **SGS**.

One Tri-Peptide and Three Amino Acids

Glutathione (also called **Reduced Glutathione** or **L-Glutathione**) is often referred to as the body’s “master” antioxidant.

Glutathione is called the “master” antioxidant because it boosts the body’s utilization and recycling of other key antioxidants, namely **Vitamin C**, **Vitamin E**, **Alpha-Lipoic Acid**, and **Coenzyme Q10**. **Glutathione** also prevents damage to cellular components caused by free radicals, peroxides, lipid peroxides, and heavy metals. **Glutathione** is a tiny protein – a tri-peptide – made by the body from three amino acids – **Glycine**, **Cysteine**, and **Glutamine**.

The presence of **Glutathione** is particularly critical in the mitochondria, the cells of the body that make energy. In the final stage of cellular energy production, one of the cellular by-products is superoxide – an oxygen molecule that has too many electrons. Superoxide is toxic to everything around it – DNA, proteins, cell membranes, even the mitochondria itself. **Glutathione**, by extinguishing and neutralizing superoxide, stabilizes and reduces oxidative stress in all cells in the body.

Although these three amino acids each have many impressive health benefits, **Glycine** – it provides strength to muscles, skin, cartilage, bones, and ligaments – **Glutamine** (as **Glutamic Acid**) – it promotes digestive health and immune function – and **Cysteine** (as **N-Acetyl-L-Cysteine**) – it's an expectorant that loosens mucus in the respiratory tract, these three nutrients are provided in an optimal ratio that facilitates the animal's natural production of **Glutathione**.

Two Vitamins and One Pro-Vitamin

Vitamin C is an effective antioxidant. It acts directly, by neutralizing free radicals, and indirectly, by recycling the antioxidant properties of **Vitamin E**. The overall consequence of **Vitamin C's** antioxidant activities is the beneficial control of oxidation of intracellular membranes throughout the body. **Vitamin C** is also an important antioxidant component of the extracellular fluids, especially the fluids that surround the lungs and the lens and retinas of the eyes. **Vitamin C** has been increased from 25 mg to 100 mg per soft chew.


Another powerful antioxidant, **Vitamin E** (as **d-Alpha Tocopherol**) also interferes with the over-production of free radicals in the body. And, unlike **Vitamin C**, which is water-soluble, **Vitamin E** is fat-soluble; therefore, **Vitamin E** helps stop the chain reaction of free radicals producing more free radicals when fat tissues undergo lipid peroxidation. By protecting against the damaging effects of lipid peroxidation in fat tissues, Vitamin E helps prevent unhealthy chronic inflammatory responses in these tissues.


Beta-Carotene, like all carotenoids, is an antioxidant. Acting as a pro-vitamin, **Beta-Carotene** is converted by the body into **Vitamin A**, which has its own potent antioxidant properties. Also a fat-soluble nutrient like **Vitamin E**, **Vitamin A's** antioxidant activity provides particular benefit to the eyes, skin, and bones.



Small Animal Antioxidant Antioxidant Support for Dogs and Cats

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 1 soft chew daily

 1-2 soft chews per 25 pounds of body weight daily

PRODUCT FACTS

Active Ingredients per 1.5-gram Soft Chew:

Ascorbic Acid (Vitamin C)	100 mg
Curcumin Phytosome (<i>Curcuma longa</i> extract (root) / Phospholipid complex from Sunflower) (CurcuVET®)	25 mg
Milk Thistle Extract (fruit) (<i>Silybum marianum</i>)	25 mg
Grape Seed Extract	20 mg
Hesperidin Methyl Chalcone	20 mg
N-Acetyl-L-Cysteine	20 mg
Trans-Resveratrol	20 mg
L-Glutathione	15 mg
Glutamic Acid	15 mg
d-Alpha Tocopheryl (Vitamin E) (12 IU)	10 mg
Quercetin Phytosome (<i>Sophora japonica</i> extract (flower) / Phospholipid complex from Sunflower)	10 mg
Glycine	6 mg
Sulforaphane Glucosinolate (from Broccoli Seed Extract)	5 mg
Beta Carotene (1,000 IU)	600 mcg

Inactive ingredients (soft chew matrix):

Arabic gum, buffered white distilled vinegar, chick pea flour, chicory root, citric acid, coconut glycerin, coconut oil, guar gum, natural hickory smoke flavor, rosemary extract, sunflower lecithin, sunflower oil, tapioca starch.

V935-SC / 120 Soft Chews



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