

Kapp-X

Kapp-X is a unique anti-inflammatory support for patients with chronic inflammation. This cutting edge formulation targets NFκB (Nuclear Factor Kappa Beta). NFκB is recognized as a main source for inflammation in that, when activated, it triggers inflammatory cascades fueling chronic disease of all kinds. Unlike aspirin or even COX inhibitors, which target the result of NFκB activity, Kapp-X supports the dampening of the root issue – NFκB activation – before it starts.



Research on NFκB inhibition from natural constituents in Kapp-X©.

Kapp-X© contains parthenolide, a powerful phytochemical from the feverfew plant. It has been shown to inhibit the NFκB pathway and improve lung function in mice with induced pulmonary fibrosis.¹ A study with rats with nonalcoholic fatty liver showed heptaoprotective effects from parthenolide.² Another study showed neuroprotective properties and aided neurotransmitter balance in diabetic mice.³ Several additional studies report positive effects from parthenolide in animals with arthritis and Blood-Brain Barrier (BBB) permeability.^{3,4,5,6}

Kapp-X contains ginger extract. The active constituent 6- Gingerol has shown protective effects on intestinal barrier permeability through inhibition of NFκB.^{10,11}

Kapp-X© also contains Baicalin, a flavone from skullcap root. Baicalin has shown cardio-protective effects in trials looking at atherosclerosis. Mechanisms appear to be anti-oxidative and anti-inflammatory through NFκB inhibition.^{12,13}

Boswellia is another anti-inflammatory constituent in Kapp-X. It has also been shown to be helpful in research studying atherosclerosis and intestinal barrier permeability.^{15,16}

Mangosteen, also in Kapp-X, was shown in research to help prevent inflammation and insulin resistance following introduction of lipopolysaccharide (LPS) to cultures with human adipocytes.^{17,18} Theaflavins, another constituent in Kapp-X, also reduced LPS-induced inflammation.¹⁹

General Suggested Usage: Take 1 capsule 3 times per day or as recommended by your healthcare professional.

Supplement Facts

Serving Size: 1 Capsule
Servings per Container: 90

	Amount Per Serving	% Daily Value
Calories	2	**
Total Fat	0	**
Total Carbohydrate	0.3 g	
Dietary Fiber	0.3 g	
Sugars	0 g	
Parthenolide	85 mg	**
Ginger Extract	35 mg	**
Baicalin	35 mg	**
Boswellia Extract	150 mg	**
Mangosteen Extract	150 mg	**
Theaflavins (as black tea extract)	10 mg	**
Thymoquinone (as black seed extract)	10 mg	**

† Daily Values are based on a 2,000 calorie diet. **Daily Value (DV) not established.

Other Ingredients: Gelatin Capsule (Gelatin, Purified water), Magnesium Stearate, Silica.

DOES NOT CONTAIN: Sugar, wheat, casein, gluten, soy, milk, egg, yeast, preservatives, artificial flavorings, colorings, peanuts, corn, tree nuts or fish.

Formulation Key Features:

- Focused on modulating inflammation through inhibiting Nuclear Factor Kappa Beta (NFκB)
- Researched compounds for reducing inflammation
- Many chronic diseases have been shown to have inflammatory causes. This formulation targets the inhibition of a deep inflammatory instigator.

Benefits:

- Combination of important herbs and nutrients focused on stopping inflammation before it starts
- Nuclear Factor Kappa Beta (NFκB) has been shown to be associated with multiple pathological effects. This formula focuses on NFκB inhibition.
- Constituents in this formula have been shown to mediate inflammation via multiple mechanisms including inhibition of NFκB, TNF-A, and IL-6.^{7,9}
- Kapp-X© also contains constituents that have been shown to reduce and/or prevent cellular dysfunction from oxidative damage^{13,15,20}

Kapp-X References

1. Li, Xiao-He, et al. "Parthenolide Attenuated Bleomycin-Induced Pulmonary Fibrosis via the NF-Kb/Snail Signaling Pathway." *Respiratory Research*, vol. 19, no. 1, 05 June 2018, p. 111. EBSCOhost, doi:10.1186/s12931-018-0806-z.
2. Bahabadi, Majid, et al. "Hepatoprotective Effect of Parthenolide in Rat Model of Nonalcoholic Fatty Liver Disease." *Immunopharmacology and Immunotoxicology*, vol. 39, no. 4, Aug. 2017, pp. 233-242. EBSCOhost, doi:10.1080/08923973.2017.1327965.
3. Khare, Pragyanshu, et al. "Parthenolide, an NF-Kb Inhibitor Ameliorates Diabetes-Induced Behavioural Deficit, Neurotransmitter Imbalance and Neuroinflammation in Type 2 Diabetes Rat Model." *Neuromolecular Medicine*, vol. 19, no. 1, Mar. 2017, pp. 101-112. EBSCOhost, doi:10.1007/s12017-016-8434-6.
4. Nam, Yoon Jeong, et al. "Sesquiterpene Lactone Parthenolide Attenuates Production of Inflammatory Mediators by Suppressing the Toll-Like Receptor-4-Mediated Activation of the Akt, Mtor, and NF-Kb Pathways." *Naunyn-Schmiedeberg's Archives of Pharmacology*, vol. 388, no. 9, Sept. 2015, pp. 921-930. EBSCOhost, doi:10.1007/s00210-015-1132-3.
5. Liu, Q, et al. "Parthenolide Inhibits Pro-Inflammatory Cytokine Production and Exhibits Protective Effects on Progression of Collagen-Induced Arthritis in a Rat Model." *Scandinavian Journal of Rheumatology*, vol. 44, no. 3, May 2015, pp. 191. EBSCOhost, doi:10.3109/03009742.2014.938113.
6. Dong, Lipeng, et al. "Parthenolide Is Neuroprotective in Rat Experimental Stroke Model: Downregulating NF-Kb, Phospho-P38mapk, and Caspase-1 and Ameliorating BBB Permeability." *Mediators of Inflammation*, vol. 2013, 2013, p. 370804. EBSCOhost, doi:10.1155/2013/370804.
7. Magni, Paolo, et al. "Parthenolide Inhibits the LPS-Induced Secretion of IL-6 and TNF-A and NF-Kb Nuclear Translocation in BV-2 Microglia." *Phytotherapy Research: PTR*, vol. 26, no. 9, Sept. 2012, pp. 1405-1409. EBSCOhost, doi:10.1002/ptr.3732.
8. Juliana, Christine, et al. "Anti-Inflammatory Compounds Parthenolide and Bay 11-7082 Are Direct Inhibitors of the Inflammasome." *The Journal of Biological Chemistry*, vol. 285, no. 13, 26 Mar. 2010, pp. 9792-9802. EBSCOhost, doi:10.1074/jbc.M109.082305.
9. Mathema, Vivek Bhakta, et al. "Parthenolide, a Sesquiterpene Lactone, Expresses Multiple Anti-Cancer and Anti-Inflammatory Activities." *Inflammation*, vol. 35, no. 2, Apr. 2012, pp. 560-565. EBSCOhost, doi:10.1007/s10753-011-9346-0.
10. Li, Yanli, et al. "6-Gingerol Protects Intestinal Barrier from Ischemia/Reperfusion-Induced Damage via Inhibition of P38 MAPK to NF-Kb Signalling." *Pharmacological Research*, vol. 119, May 2017, pp. 137-148. EBSCOhost, doi:10.1016/phrs.2017.01.026.
11. Luettig, Julia, et al. "The Ginger Component 6-Shogaol Prevents TNF-A-Induced Barrier Loss via Inhibition of PI3K/Akt and NF-Kb Signaling." *Molecular Nutrition & Food Research*, vol. 60, no. 12, Dec. 2016, pp. 2576-2586. EBSCOhost, doi:10.1002/mnfr.201600274.
12. Fu, Shulin, et al. "Baicalin Modulates NF-Kb and NLRP3 Inflammasome Signaling in Porcine Aortic Vascular Endothelial Cells Infected by Haemophilus Parasuis Causing Glässer's Disease." *Scientific Reports*, vol. 8, no. 1, 16 Jan. 2018, p. 807. EBSCOhost, doi:10.1038/s41598-018-19293-2.
13. Wu, Yuliang, et al. "Baicalin Alleviates Atherosclerosis by Relieving Oxidative Stress and Inflammatory Responses via Inactivating the NF-Kb and P38 MAPK Signaling Pathways." *Biomedicine & Pharmacotherapy = Biomedecine & Pharmacotherapie*, vol. 97, Jan. 2018, pp. 1673-1679. EBSCOhost, doi:10.1016/j.biopha.2017.12.024.
14. Kim, Dae Hyun, et al. "Short-Term Feeding of Baicalin Inhibits Age-Associated NF-Kappab Activation." *Mechanisms of Ageing and Development*, vol. 127, no. 9, Sept. 2006, pp. 719-725. EBSCOhost, search.ebscohost.com/login.aspx?direct=true&db=mnh&AN=16766019&site=ehost-live.
15. Catanzaro, Daniela, et al. "Boswellia Serrata Preserves Intestinal Epithelial Barrier from Oxidative and Inflammatory Damage." *Plos One*, vol. 10, no. 5, 08 May 2015, p. e0125375. EBSCOhost, doi:10.1371/journal.pone.0125375.
16. Cuaz-Pérolin, Clarisse, et al. "Antiinflammatory and Antiatherogenic Effects of the NF-Kappab Inhibitor Acetyl-11-Keto-Beta-Boswellic Acid in LPS-Challenged Apoe-/- Mice." *Arteriosclerosis, Thrombosis, and Vascular Biology*, vol. 28, no. 2, Feb. 2008, pp. 272-277. EBSCOhost, search.ebscohost.com/login.aspx?direct=true&db=mnh&AN=18032778&site=ehost-live.
17. Bumrungpert, Akkarach, et al. "Xanthenes from Mangosteen Inhibit Inflammation in Human Macrophages and in Human Adipocytes Exposed to Macrophage-Conditioned Media." *The Journal of Nutrition*, vol. 140, no. 4, Apr. 2010, pp. 842-847. EBSCOhost, doi:10.3945/jn.109.120022.
18. Bumrungpert, Akkarach, et al. "Xanthenes from Mangosteen Prevent Lipopolysaccharide-Mediated Inflammation and Insulin Resistance in Primary Cultures of Human Adipocytes." *The Journal of Nutrition*, vol. 139, no. 6, June 2009, pp. 1185-1191. EBSCOhost, doi:10.3945/jn.109.106617.
19. Wu, Yanting, et al. "In Vitro and in Vivo Anti-Inflammatory Effects of Theaflavin-3,3'-Digallate on Lipopolysaccharide-Induced Inflammation." *European Journal of Pharmacology*, vol. 794, 05 Jan. 2017, pp. 52-60. EBSCOhost, doi:10.1016/j.ejphar.2016.11.027.
20. Usta, Ayşe and Semiha Dede. "The Effect of Thymoquinone on Nuclear Factor Kappa B Levels and Oxidative DNA Damage on Experimental Diabetic Rats." *Pharmacognosy Magazine*, vol. 13, no. Suppl 3, Oct. 2017, pp. S458-S461. EBSCOhost, doi:10.4103/pm.pm_134_17.
21. Zhang, Lida, et al. "Thymoquinone Chemosensitizes Colon Cancer Cells through Inhibition of NF-Kb." *Oncology Letters*, vol. 12, no. 4, Oct. 2016, pp. 2840-2845. EBSCOhost, search.ebscohost.com/login.aspx?direct=true&db=mnh&AN=27698868&site=ehost-live.