

# Kapp-X

## Inflammation Balance



### PRODUCT BENEFITS\*

- **A blend of herbs and nutrients to promote healthy inflammatory balance.**
- **This formula promotes NFkB inhibition**
- **Constituents in this formula have been shown to mediate inflammation via multiple mechanisms including inhibition of NFkB, TNF-A, and IL-6<sup>7,9</sup>**
- **Kapp-X also contains constituents that have been shown to reduce and/or prevent cellular dysfunction from oxidative damage<sup>13,15,20</sup>**



Kapp-X is a unique anti-inflammatory support for patients with chronic inflammation. This cutting-edge formulation targets NFkB (Nuclear Factor Kappa Beta). NFkB 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 NFkB activity, Kapp-X supports the dampening of the root issue – NFkB activation – before it starts.

**Research on NFkB 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 NFkB pathway and improve lung function in mice with induced pulmonary fibrosis.<sup>1</sup> A study with rats with nonalcoholic fatty liver showed hepatoprotective effects from parthenolide.<sup>2</sup> Another study showed neuroprotective properties and aided neurotransmitter balance in diabetic mice.<sup>3</sup> Several additional studies report positive effects from parthenolide in animals with arthritis and Blood-Brain Barrier (BBB) permeability.<sup>3,4,5,6</sup>

**Kapp-X contains ginger extract.** The active constituent 6-Gingerol has shown protective effects on intestinal barrier permeability through inhibition of NFkB.<sup>10,11</sup>

### SUPPLEMENT FACTS

Serving size: 1 Capsule Servings per container: 90	Amount Per Serving	% Daily Value
Mangosteen Extract	150 mg	**
Boswellia Extract	150 mg	**
Feverfew Powder	85 mg	**
Ginger Extract	35 mg	**
Baicalin	35 mg	**
Theaflavins (as Black Tea Extract)	10 mg	**
Black Seed Extract	10 mg	**

\* Percent Daily Values are based on a 2000 calorie diet.

\*\* Daily Value Not Established

**Other Ingredients:** Microcrystalline Cellulose, Silicon Dioxide, Vegetable Stearate.

**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 NFkB inhibition.<sup>12,13</sup>

**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.<sup>15,16</sup>

**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.<sup>17,18</sup> Theaflavins, another constituent in Kapp-X, also reduced LPS-induced inflammation.<sup>19</sup>

\*To be provided by health care professionals only. The dosage recommendations are only for your health care provider's consideration. Please consult your health care provider for your individual dosing instructions. This product is for nutritional purposes only. It is not designed to diagnose, treat, reverse, cure, or prevent any disease. This product is not intended to replace or delay the use of prescription medication. These statements have not been evaluated by the FDA. All rights reserved © Biogenetix, LLC

## DIRECTIONS FOR USE

Take 1 capsule 3 times per day, or as directed by your health care professional.

## STORAGE

Store in a cool, dry place away from direct sunlight. Product from unopened containers that have been stored under recommended conditions (55-85° F / 13-29° C) may be used for up to 36 months.

## WARNING

Consult your health care professional before use if pregnant, nursing, taking medications, or for any use by minors. Do not use if safety seal is broken or missing. Keep out of reach of children.

## REFERENCE LIST

- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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/j.phrs.2017.01.026.
- 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.
- 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.
- 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 = Biomedicine & Pharmacotherapie*, vol. 97, Jan. 2018, pp. 1673-1679. EBSCOhost, doi:10.1016/j.biopha.2017.12.024.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.