

## KPV 500mcg cap

### Background

KPV is a tripeptide (Lysine-Proline-Valine) that acts as a potent inhibitor of inflammatory substances and molecules, e.g., disables inflammatory pathways. KPV is strongly associated with comprehensive gut health. The peptide is a more complete and natural method to reduce candida and yeast population, and, by extension, limit future overgrowth following therapy. It is a popular therapeutic to alleviate symptoms of inflammatory bowel diseases, plus associated with accelerated wound healing and pain relief.

### Research

KPV resides in the family of peptides known as the melanocortins, associated with many life functions, e.g., energy regulation and inflammation. According to Dalmaso et al. (2008) KPV's action mechanism is through hPepT1 (e.g., developed from dietary proteins and known conduit for tripeptides)<sup>1</sup>. The observed anti-inflammatory response, specifically chronic digestive diseases, is a result of the peptide's ability to attenuate pro-inflammatory cytokine expression<sup>1</sup>. Furthermore, KPV is a natural biologic molecule that supports restoration of microbiome balance, thus expanding overall gut health. The tripeptide downregulates mast cells in the immune system and as a natural antihistamine relieves allergies and mold illnesses. Specific to ulcerative colitis treatment, Xiao et al. (2017) suggests KPV augments mucosal healing and repair of damaged colonic epithelial cells<sup>2</sup>. Macrophages are white blood cells that serve to neutralize harmful microorganisms and yield an anti-inflammatory immune response. According to Land (2012), although it is unclear the extent of macrophage activation (if any), KPV shows promise to limit pro-inflammatory responses associated with airway damage<sup>3</sup>. Furthermore, in an earlier animal investigation Kannengiesser et al. (2008) found KPV to be potentially effective in Inflammatory Bowel Disease (IBD) treatment<sup>4</sup>.

### Conclusion

KPV can be an important therapeutic approach to overall immune and gut health. The peptide exhibits the ability to deactivate inflammatory pathways, specifically alleviation of symptoms associated with chronic digestive diseases. Additionally, KPV is a natural biologic molecule that can reestablish microbiome balance, leading to enhanced energy levels and mood, plus a stronger immune system. Finally, this peptide is associated with comprehensive pain relief.

### References

<sup>1</sup> Dalmaso G, Charrier-Hisamuddin L, Nguyen HT, Yan Y, Sitaraman S, Merlin D. PepT1-mediated tripeptide KPV uptake reduces intestinal inflammation. *Gastroenterology*. 2008 Jan;134(1):166-78. doi: 10.1053/j.gastro.2007.10.026. Epub 2007 Oct 17. PMID: 18061177; PMCID: PMC2431115.

<sup>2</sup> Xiao B, Xu Z, Viennois E, Zhang Y, Zhang Z, Zhang M, Han MK, Kang Y, Merlin D. Orally Targeted Delivery of Tripeptide KPV via Hyaluronic Acid-Functionalized Nanoparticles Efficiently Alleviates Ulcerative Colitis. *Mol Ther*. 2017 Jul 5;25(7):1628-1640. doi: 10.1016/j.ymthe.2016.11.020. Epub 2017 Jan 28. PMID: 28143741; PMCID: PMC5498804.

<sup>3</sup>Land SC. Inhibition of cellular and systemic inflammation cues in human bronchial epithelial cells by melanocortin-related peptides: mechanism of KPV action and a role for MC3R agonists. *Int J Physiol Pathophysiol Pharmacol.* 2012;4(2):59-73. Epub 2012 Jun 23. PMID: 22837805; PMCID: PMC3403564.

<sup>4</sup>Kannengiesser Klaus, Christian Maaser, Jan Heidemann, Andreas Luegering, Matthias Ross, Thomas Brzoska, Markus Bohm, Thomas A. Luger, Wolfram Domschke, Torsten Kucharzik, Melanocortin-derived tripeptide KPV has anti-inflammatory potential in murine models of inflammatory bowel disease, *Inflammatory Bowel Diseases*, Volume 14, Issue 3, 1 March 2008, Pages 324–331, <https://doi.org/10.1002/ibd.20334>.

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