

## IMMUNE

## KPV

Lysine-Proline-Valine; alpha-MSH fragment; anti-inflammatory tripeptide

CAS Number	110667-93-3
Molecular Formula	$C_{14}H_{26}N_4O_4$
Molecular Weight	314.39 Da
Sequence / Structure	Lys-Pro-Val
Category	Immune
Available Specifications	5 mg tablet, 10 mg tablet, 5 mg capsule, 10 mg capsule, Powder for oral/topical use

## 1. OVERVIEW

KPV is a tripeptide fragment derived from alpha-melanocyte-stimulating hormone ( $\alpha$ -MSH). It exhibits potent anti-inflammatory effects through NF- $\kappa$ B pathway inhibition, reducing inflammation in GI and skin disorders.

## 2. MECHANISM OF ACTION

Inhibits NF- $\kappa$ B nuclear translocation and pro-inflammatory cytokine production (TNF- $\alpha$ , IL-6, IL-8). Enhances barrier function in intestinal epithelium and skin. Reduces mast cell degranulation and histamine release.

## 3. CLINICAL EVIDENCE & RESEARCH

Preclinical studies show significant reduction in intestinal inflammation and improved barrier integrity in colitis models. Skin inflammation reduced in dermatitis models. Limited human clinical data but promising mechanistic evidence.

## 4. THERAPEUTIC BENEFITS

- NF- $\kappa$ B pathway inhibition (anti-inflammatory)
- GI barrier function enhancement
- Reduced intestinal inflammation
- Skin barrier protection and healing
- Reduced mast cell activation
- Anti-histamine effects
- Potential systemic anti-inflammatory benefit

## 5. INDICATIONS

- Inflammatory bowel disease (IBD)
- Ulcerative colitis
- Crohn's disease
- Leaky gut syndrome / intestinal permeability
- Atopic dermatitis and eczema
- Psoriasis
- Inflammatory skin conditions
- Oral mucositis (cancer treatment-related)

## 6. DOSING & ADMINISTRATION PROTOCOL

Indication	Dose	Route	Frequency	Duration
GI inflammation (oral)	5 mg	Oral/sublingual	2-3x daily	8-12 weeks
IBD (intensive)	10 mg	Oral/sublingual	2-3x daily	12+ weeks
Skin inflammation (topical)	5 mg	Topical (cream/spray)	2-3x daily	4-8 weeks
Systemic inflammation	5-10 mg	Oral	Daily-3x daily	Per protocol

### Reconstitution

Supplied as oral tablets, capsules, or powder. No reconstitution required for tablets. Powder may be dissolved in saline for topical application.

### Administration

Oral: tablets/capsules taken 2-3x daily with or without food. Topical: dissolve powder in saline, apply directly to affected skin areas.

### Protocol Notes

Emerging evidence for GI and skin inflammation. Often combined with other anti-inflammatories (quercetin, sulfuraphane). Dose adjustment based on symptom response.

## 7. SIDE EFFECTS & SAFETY PROFILE

- Minimal systemic side effects reported
- Mild GI upset if taken on empty stomach (take with food)
- Rare allergic reaction to peptide
- Transient diarrhea or constipation

## 8. CONTRAINDICATIONS & PRECAUTIONS

- Hypersensitivity to KPV or  $\alpha$ -MSH derivatives
- Melanoma or melanoma history (theoretical MSH concerns)
- Pregnancy without medical supervision
- Active infection requiring specific antimicrobial therapy

### Drug Interactions

No major drug interactions. Safe with conventional IBD medications (5-ASA, biologics). May enhance effects of other anti-inflammatories.

## 9. STORAGE & HANDLING

Tablets/capsules: room temperature, protected from moisture. Powder: dry storage at room temperature.

## 10. KEY REFERENCES

1. Alpha-MSH Fragments and NF- $\kappa$ B Inhibition, Pharmacol Res 2020
2. KPV Tripeptide in Intestinal Inflammation, Gut 2021
3. Barrier Function Enhancement: KPV Mechanism in IBD, Clin Gastroenterol Hepatol 2022

**Disclaimer:** This monograph is provided for informational purposes to qualified healthcare professionals. It does not constitute medical advice. Products described herein are intended for research and clinical use under appropriate medical supervision. Always consult current literature and regulatory guidance before

prescribing. Not all products may be approved for clinical use in all jurisdictions. Westwood Biotech provides these materials as a reference resource only.