

PRODUCT

KPV 10MG

10 mg/vial · NUL-V-KPV-10

RELEASED

LOT NUMBER	MANUFACTURE DATE	EXPIRY DATE	VIALS IN LOT	STORAGE CONDITIONS
NUL-KPV-20260601-01	1-Jun-2026	1-Jun-2027	158	Store at -20°C until first use Store at 2-8°C after first use

1	FILL WEIGHT	
TARGET FILL WEIGHT (mg)		FILL WEIGHT CONFORMANCE (vials passed/total vials in lot)
10.00		158/158

2	ANALYTICAL TEST RESULTS			
PARAMETER	METHOD	SPECIFICATION	RESULT	WHY IT MATTERS
Appearance Visual Inspection	Visual	White to off white free flowing powder	Pass	Visual anomalies such as discoloration, clumping or particulates can indicate degradation, contamination, or moisture ingress, any of which compromise product integrity before analytical testing is even performed.
Purity Area %	HPLC @ 274nm	≥99%	Pass	Measures what fraction of the material is the complete target peptide vs. synthesis byproducts, truncated sequences, or degradation products. High purity ensures the results reflect the intended compound and ensures identity by confirming retention time during this test aligns with with a certified reference standard.
Microbials Total Aerobic Count · Enterobacteriaceae · Total Yeast & Mold	qPCR	Total Aerobic Count: ND in 1g; Enterobacteriaceae: ND in 1g; Total Yeast & Mold: ND in 1g	Not Detected — Pass (all 3 analytes)	Confirms the finished vial is free of viable bacteria, Enterobacteriaceae, yeast, and mold. Microbial contamination in reconstituted peptide solutions can invalidate cell-based and in vivo research results.
Mycotoxins Aflatoxins B1/B2/G1/G2 · Ochratoxin A · Total Aflatoxins	LCMS	Aflatoxins B1, B2, G1, G2 <4 µg/kg each; Total Aflatoxins <20 µg/kg; Ochratoxin A <20 µg/kg	Not Detected — Pass (all 6 analytes)	Mycotoxins are toxic fungal metabolites that can contaminate peptide raw materials during synthesis or storage. Even trace levels of aflatoxins and ochratoxin A are potent carcinogens and nephrotoxins that confound research outcomes and pose handling risks.
Water Activity Moisture determination	Water Activity Meter	<0.65 aw (threshold for microbial growth)	Pass	Lyophilized peptides absorb atmospheric moisture, which dilutes the active content per mg and accelerates degradation. Knowing water content allows researchers to calculate the true peptide mass when preparing solutions for experiments.

Residual solvents

GC headspace

ICH Q3C Class 2/3 limits

Below ICH limits — Pass

Organic solvents such as DMF, DCM, and acetonitrile are used during synthesis and purification. Residual traces can interfere with biological assays, affect cell viability, and indicate incomplete purification of the final product. This test was performed on the bulk API lot during incoming raw material inspection by Noble Harbor Sciences prior to manufacturing.

Headspace analysis, tested at raw material inspection

Elemental Impurities (Heavy Metals)

ICPMS

USP <232>

Below USP limits — Pass

Heavy metals accumulate in biological systems and can interfere with enzyme activity, receptor binding, and cell viability. Even trace levels of arsenic, cadmium, lead, and mercury can confound in vitro and in vivo research outcomes.

ArsenicArsenic · Cadmium · Lead · Mercury, tested at raw material inspection

TESTED BY

pH Solutions

GMP Third party testing laboratory

Produced By

NuLumin Bio-Sciences

NuLumin Bio-Sciences maintains ultimate authority for final product release and assumes all responsibility for the marketing, distribution, and fitness of the product for its intended research use.

AUTHORIZED RELEASE

This lot has been independently reviewed and released by NuLumin Bio-Sciences based on conformant data provided by third-party contractors.

All tested parameters conform to the specifications defined in this certificate.

For Research Use Only. Not for use in diagnostic procedures. Not for human or veterinary use. This product has not been evaluated by the FDA for safety or efficacy. Nulumin Bio-Sciences makes no representations regarding the safety, efficacy, or fitness of this product for any purpose other than laboratory research

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