

SENESCENT REGULATOR

Rejuvenation and Metabolic Regulation at a Cellular Level*



Senescent Regulator serves to offer next level support through cutting-edge key compounds, including pterostilbene, resveratrol, luteolin, and curcumin, that have been shown to support autophagy.

Autophagy is a cellular process that is essential for maintaining cellular homeostasis and preventing age-related diseases. The process involves the degradation and recycling of damaged proteins and organelles, which helps to prevent the accumulation of cellular waste and the formation of senescent cells, often referred to as Zombie Cells. It accomplishes this through five main mechanisms: clearance of damaged organelles, regulation of reactive oxygen species (ROS), removal of misfolded proteins, regulation of cellular metabolism and prevention of genomic instability.



DEMOGRAPHIC & CLINICAL APPLICATIONS

MEN & WOMEN



PATIENTS REQUIRING

- Healthy Aging & Longevity Support
- Neurological Processing & Function Support
- SIRT1 & AMPK Expression Support



BENEFITS



Aids Body's Process
of Reusing Old &
Damaged Cell Parts



Supports Healthy
mTOR Inhibition &
AMPK Expression



Promotes Healthy,
Youthful Cellular
Function

DIRECTIONS:

Take 2 capsules daily or as directed
by your healthcare practitioner.

SUPPLEMENT FACTS

Serving Size: 2 Capsules | Servings Per Container: 30

	Amount Per Serving	%DV
TurmiPure Gold® Turmeric Extract (<i>Curcuma longa</i>) (rhizome) (min. 30% curcuminoids)	300 mg	*
CurcuPrime® Tetrahydrocurcumin	200 mg	*
Luteolin	200 mg	*
Resveratrol (<i>Polygonum cuspidatum</i> Sieb.) (Root)	50 mg	*
Pterostilbene (<i>Pterocarpus marsupium</i>) (Wood)	50 mg	*

* Daily Value Not Established

Other Ingredients: Vegetable Capsule
(Hypromellose)





INGREDIENTS

Resveratrol & Pterostilbene

Pterostilbene and resveratrol activate SIRT1, a protein that plays a critical role in regulating autophagy.^{1,2} One of the ways that SIRT1 regulates autophagy is by deacetylating and activating the transcription factor forkhead box O (FOXO) family of proteins. FOXO proteins are involved in the regulation of autophagy-related genes, including LC3 (microtubule-associated protein 1 light chain 3) and Beclin-1, which are critical for the initiation and progression of autophagy. They also modulate the AMPK/mTOR pathway, supporting healthy levels of oxidative stress.³

Luteolin

Luteolin, which is rich in foods such as celery, parsley, apple skins, cabbage and broccoli, can induce autophagy by modulating signaling pathways, regulating autophagy-related genes, reducing cellular stress, and activating transcription factors. Signaling pathways luteolin works on are AMPK and mTOR.⁴ Similar to pterostilbene and resveratrol, Luteolin regulates Beclin-1 and LC3-II but also impacts Atg5, which is responsible for initiating the destruction of damaged cells and organelles.⁵



Curcumin (as CurcuPrime® Tetrahydrocurcumin & TurmiPure Gold® Turmeric Extract)

Curcumin works in much the same way in terms of pathways and mechanisms, however in addition to activating AMPK and promoting the expression of autophagy-related genes it also addresses two additional areas: cellular stress and lysosomal function.^{6,7} Curcumin has been shown to support healthy levels of oxidative stress, which can promote autophagy. By increasing lysosomal function, curcumin can help initiate the breakdown of cellular waste, and increase the activity of lysosomal enzymes.

CurcuPrime®, which is tetrahydrocurcumin (4HC), is a major curcuminoid metabolite of curcumin, naturally occurring in turmeric. This 4hc provides potent antioxidant properties, supporting autophagy and cellular renewal all while contributing to metabolic, cardiovascular and neurological health.

TurmiPure Gold® Turmeric Extract is a highly concentrated water dispersible form of curcumin, that demonstrated a 24x higher bioavailability than standard 95% curcumin. Ideal for a range of system support at a far lower dose than is typically needed.

LONG TERM HEALTHSPAN SUPPORT

Supporting autophagy with these natural compounds has several potential health benefits, including supporting neurological function, immune system regulation and setting the stage for longevity and optimal healthspan. For example, a study found that resveratrol can support cognitive function in older adults by promoting autophagy in the brain.⁸ Another study found that stilbenes have a potentially supportive role involving glucose and insulin metabolism via various cellular and subcellular mechanisms including GLUT4 upregulation, insulin receptors sensitization, and supporting healthy levels of inflammation.⁹

In addition to supporting autophagy, these natural compounds can also help to prevent senescent cell formation. A study found that pterostilbene can reduce the number of senescent cells in the liver of mice by promoting autophagy. Another study found that resveratrol can reduce the accumulation of senescent cells in the skin of mice by promoting autophagy.

By promoting and ongoing, consistent process of autophagy with Senescent Regulator and activating SIRT1, modulating the AMPK/mTOR pathway, mitigating oxidative stress, and regulating autophagy-related genes, individuals are ideally positioned for promoting overall health and longevity.



REFERENCES

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