

Liposomal Glutathione

DESCRIPTION

Liposomal Glutathione, provided by Douglas Laboratories®, contains 250 mg of glutathione in its active reduced form paired with a liposomal phospholipid complex to enhance absorption. Glutathione is an important nutrient in the body that supports antioxidant defenses, cellular function and liver detoxification pathways. ‡

INDICATIONS

- Protects and supports cellular function. ‡
- Supports liver health and detoxification. ‡

FUNCTIONS AND MECHANISM OF ACTION

Glutathione is found in virtually every cell of the body and plays a critical role in protein synthesis, enzyme function, transport, and cell maturation. It is a naturally-occurring tripeptide of the amino acids L-cysteine, L-glutamate and L-glycine that confers antioxidant assistance and promotes phase I conjugation pathways in the liver to support detoxification. Glutathione sulfotransferase is the main phase II enzyme involved in the conjugation pathways, along with two antioxidant enzymes in the body; glutathione peroxidase and glutathione reductase. As such, glutathione protects the body from free radicals to support cellular function and homeostasis. ‡

Glutathione is absorbed in the intestines. The proprietary blend in Liposomal Glutathione combines reduced glutathione and specialized liposomes enriched with purified phosphatidylcholine. Purified phosphatidylcholine delivery system offers natural liposomal formation due to the hydrophobic and hydrophilic nature of phospholipids. The liposomal form protects glutathione bonds from the degradation that can occur in digestion. In an in vitro bioavailability study, glutathione absorption across an intestinal cell (Caco-2) monolayer was significantly greater with Liposomal Glutathione compared to a matching, non-liposomal powder. Optimal levels of glutathione have been associated with physical and mental health. ‡

FORMULA (#202466)

Each softgel capsule contains:

BioGlute™proprietary blend of glutathione	
and essential phospholipid:	375 mg
Setria® glutathione.....	250 mg
Phospholipid complex	125 mg
Other ingredients: gelatin capsule (gelatin, glycerin, water), extra virgin olive oil, beeswax, calcium carbonate.	

BioGlute™ is a registered trademark of Essential Nutraceuticals, LLC
 Setria® is a registered trademark of KYOWA HAKKO BIO Co., Ltd.

Contains: Soy
Non-GMO, Gluten-free

SUGGESTED USE

Adults take 1 softgel capsule, 1-2 times daily with meals or as directed by a healthcare professional.

SIDE EFFECTS

No adverse side effects have been reported.

Liposomal Glutathione

STORAGE

Store in a cool, dry place, away from direct light. Keep out of reach of children.

REFERENCES

- Schulz, J. B., Lindenau, J., Seyfried, J. and Dichgans, J. *European Journal of Biochemistry*, 2000. 267: 4904–4911.
- Johnson W, Wilson-Delfosse A, Mielay J. *Nutrients* 2012, 4(10), 1399-1440.
- Ramires PR, Ji LL. *American Journal of Physiology - Heart and Circulatory Physiology* 2001;8:(281)2, H679-H688.
- Sen CK, Atalay M, Hanninen O. *Journal of Applied Physiology*, 1994;11(77) 5, 2177-2187.
- Lauver DA, Kaissarian NM, Lucchesi BR. *J Cardiovasc Pharmacol*. 2013 Mar;61(3):233-9.
- Zeevalk GD, Bernard LP, Guilford FT. *Neurochem Res*. 2010 Oct;35(10):1575-87.
- Richie JP Jr, Nichenametla S, Neidig W, et. al. *Eur J Nutr*. 2015 Mar;54(2):251-63.
- Cai J, Nelson KC, Wu M, Sternberg P Jr, Jones DP. *Prog Retin Eye Res*. 2000 Mar;19(2):205-21.
- Knapen MF, Zusterzeel PL, Peters WH, et. al. *Eur J Obstet Gynecol Reprod Biol*. 1999 Feb;82(2):171-84.
- Wu G, Fang YZ, Yang S, et. al. *J Nutr*. 2004 Mar;134(3):489-92.
- Lang CA, Mills BJ, Lang HL, et. al. *J Lab Clin Med*. 2002 Dec;140(6):413-7.
- Rosenblat M, Volkova N, Coleman R, Aviram M. *Atherosclerosis*. 2007 Dec;195(2):e61-8.
- Honda Y, Kessoku T, Sumida Y, et al. *BMC Gastroenterol*. 2017 Aug 8;17(1):96.
- Wendel A, Jaeschke H. *Biochem Pharmacol*. 1982 Nov 15;31(22):3607-11.
- Wendel A. *Int J Clin Pharmacol Res*. 1983;3(6):443-7.
- Kidd PM. *Alternative Medicine Review*. 2(3); 155-176.

For more information on Liposomal Glutathione visit douglaslabs.com

‡These statements have not been evaluated by the Food and Drug Administration.
This product is not intended to diagnose, treat, cure, or prevent any disease.

Manufactured for
Douglas Laboratories
600 Boyce Road
Pittsburgh, PA 15205
800-245-4440
douglaslabs.com



© 2018 Douglas Laboratories. All Rights Reserved