

FORMULA

$C_{10}H_{17}N_3O_6S$

CLASS

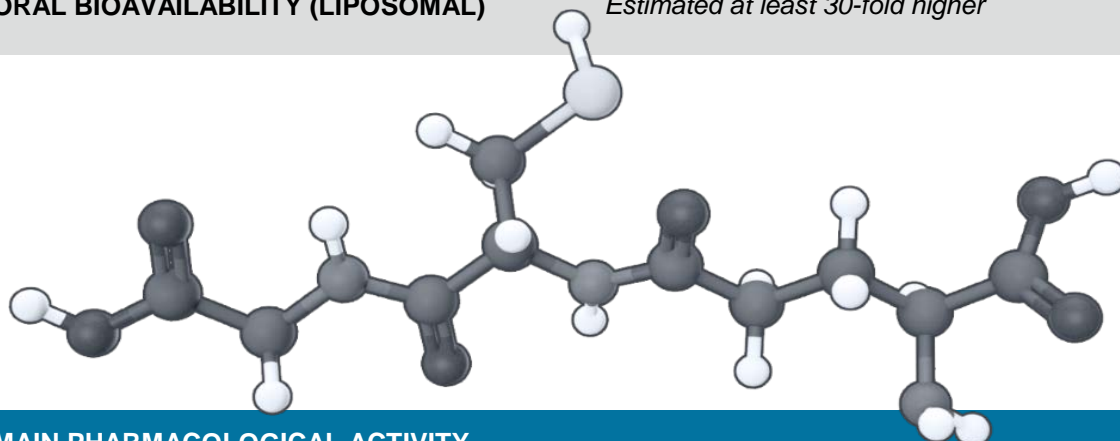
Tripeptide

ORAL BIOAVAILABILITY

Insignificant

ORAL BIOAVAILABILITY (LIPOSOMAL)

Estimated at least 30-fold higher



MAIN PHARMACOLOGICAL ACTIVITY

ANTIOXIDATIVE

Scavenges free radicals directly or through enzymatic catalysis, prevents the oxidation of biomolecules

ANTI-INFLAMMATORY

Capable to suppress inflammation by decreasing the reactive oxygen species (ROS)
Capable to inhibit inflammatory pathways

NEUROPROTECTIVE

Exerts significant improvement in cognitive performance and the Dementia Rating Scale

ANTICANCER

Effective in removal and detoxification of carcinogens, helps to reduce cancer incidents

HEPATOPROTECTIVE

Prevents liver oxidative injury by increasing antioxidant level

ANTIVIRAL

Inhibits viral replication by reducing ROS levels, inhibits pro-inflammatory proteins levels associated with viral infections in HIV and Tuberculosis patients, prevents cytokine storm in Covid-19

CARDIOPROTECTIVE

Prevents major cardiovascular diseases like hypertension and atherosclerosis by maintaining redox balance

LUNG PROTECTIVE

Preventing lung diseases like chronic obstructive pulmonary diseases by maintaining the balance of thiol-redox state

ANTIDIABETIC

Improves insulin-mediated glucose uptake, prevents the development of hyperglycemia and the decrease in insulin levels, reduces apoptosis in pancreatic β -cells

IMMUNOMODULATING

Prevents autoimmune diseases and immune dysfunctions by reducing the oxidative burden and regulating immune cells response

POSSIBLE CLINICAL APPLICATION

- Cancers
- Pulmonary viral infections diseases
- Neurodegenerative diseases (Alzheimer's, Parkinson's, multiple sclerosis, autism)
- Liver diseases (alcoholic, injury related, fibrogenesis related)
- Autoimmune diseases (arthritis, lupus, psoriasis)
- Osteoporosis

References:

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2756154/>
<https://www.mdpi.com/2076-3921/9/10/914/htm>
<https://link.springer.com/article/10.1007/s11064-020-03030-1>