LKT Laboratories, Inc.

Phenethyl Isothiocyanate

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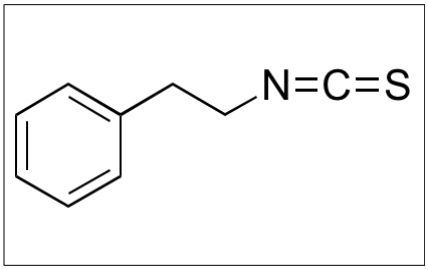
Product Information

Product ID P2508
CAS No. 2257-09-2
Chemical Name 2-Isothiocyanatoethylbenzene

Synonym Phenylethyl mustard oil



Formula C_9H_9NS
Formula Wt. 163.24
Melting Point
Purity ≥98%
Solubility Insoluble in water. Soluble in ethanol, DMSO.

Density: 1.094g/ml

Bulk quanitites available upon request

Product ID	Size
P2508	5 g
P2508	10 g
P2508	50 g

Store Temp -20˚C
Ship Temp Ambient

Description Phenethyl isothiocyanate (PEITC) is found in plants of the *Brassicaceae* family, including broccoli, cabbage, and radish. Isothiocyanates are best known for their antioxidative, anticancer chemotherapeutic, chemopreventive, anti-angiogenic, and antibiotic properties. In vitro, PEITC increases caspase 3 activity and cleavage of poly(ADP)-ribose polymerase (PARP), inducing caspase-mediated apoptosis in Jurkat T cells and other cellular models. PEITC increases activation of JNK1, one potential mechanism behind its regulation of phase II detoxifying enzyme gene expression. Additionally, PEITC decreases levels of Bcl-xl and increases levels of Bax, also decreasing the mitochondrial membrane potential and inducing intracellular influx of free Ca2+, resulting in cell death. This compound decreases oxidation of carcinogen NNK and increases activity of NADPH:quinone oxidoreductase and glutathione S-transferase in vitro and in vivo. In glioma cells, PEITC alters PI3K/MAPK signaling to inhibit accumulation of HIF-1α and secretion of VEGF during hypoxia.

*Refractive index:n*20/D 1.5888(lit.)

References

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