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Poly-gamma Glutamic Acid

National Cancer Institute

Source

National Cancer Institute. *Poly-gamma Glutamic Acid*. NCI Thesaurus. Code C106124.

A water-soluble and biodegradable polymer naturally synthesized by various strains of *Bacillus* and composed of D- and L-glutamic acid polymerized via gamma-amide linkages, with potential antineoplastic activity. Upon administration, poly-gamma glutamic acid may augment the immune response by increasing the production of interferon-gamma (IFN-gamma) and tumor necrosis factor-alpha (TNF-alpha) and inducing the activation of macrophage and natural killer (NK) cells. IFN-gamma is a major mediator of innate and adaptive immunity against viral and intracellular bacterial infections as well as for tumor control. TNF-alpha is a cytokine involved in systemic inflammation, which is capable of inducing apoptotic cell death and exhibits anti-tumoral effects.