

[Open Peer Review on Qeios](#)

# Polaprezinc

National Cancer Institute

## Source

National Cancer Institute. *Polaprezinc*. NCI Thesaurus. Code C118371.

An orally bioavailable chelate composed of zinc and L-carnosine, with potential gastroprotective, anti-oxidant, anti-ulcer and anti-inflammatory activities. Upon administration, polaprezinc increases the expression of various anti-oxidant enzymes, such as superoxide dismutase 1 (SOD-1), SOD-2, heme oxygenase-1 (HO-1), glutathione S-transferase (GST), glutathione peroxidase (GSH-px), peroxidoredoxin-1 (PRDX1; PRXI) and PRXD5 (PRXV) in the gastric mucosa, which protect cells against reactive oxygen species (ROS). In addition, this agent inhibits the activity of the transcription factor nuclear factor-kappaB (NF-kappaB) and reduces the expression of several pro-inflammatory cytokines, such as interleukin (IL) 1beta, IL-6, IL-8, and tumor necrosis factor alpha (TNF-a). Polaprezinc also increases the expression of various growth factors, such as platelet-derived growth factor-B (PDGF-B), vascular endothelial growth factor (VEGF), and nerve growth factor (NGF), and various heat shock proteins (HSPs), including HSP90, HSP70, HSP60, HSP47, HSP27, and HSP10. This protects against damages to, and accelerates healing of the gastric mucosa.