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Masoprocol

National Cancer Institute

Source

National Cancer Institute. *Masoprocol*. NCI Thesaurus. Code C701.

A naturally occurring antioxidant dicatechol originally derived from the creosote bush *Larrea divaricata* with antipromoter, anti-inflammatory, and antineoplastic activities. Masoprocol directly inhibits activation of two receptor tyrosine kinases (RTKs), the insulin-like growth factor receptor (IGF-1R) and the c-erbB2/HER2/neu receptor, resulting in decreased proliferation of susceptible tumor cell populations. This agent may induce apoptosis in susceptible tumor cell populations as a result of disruption of the actin cytoskeleton in association with the activation of stress activated protein kinases (SAPKs). In addition, masoprocol inhibits arachidonic acid 5-lipoxygenase (5LOX), resulting in diminished synthesis of inflammatory mediators such as prostaglandins and leukotrienes. It may prevent leukocyte infiltration into tissues and the release of reactive oxygen species.