Patulin is a mycotoxin initially produced by species of *Penicillium* and *Aspergillus* that is commonly found as a contaminant in apples and apple products. In keratinocytes, patulin increases phosphorylation of EGFR, activates Ras/MAPK/Akt signaling, activates NF-κB, and increases expression of cyclin D1 and COX-2, increasing cell proliferation. Patulin exhibits genotoxic and anticancer activities in a variety of cellular models. Patulin induces DNA damage through the formation of crosslinks. Patulin also activates cleavage of poly(ADP)-ribose polymerase (PARP), increases phosphorylation of EGR-1, and activates caspase 3, resulting in ROS-dependent apoptosis in colorectal cancer cells and leukemia cells. Additionally, patulin decreases transepithelial resistance, altering intestinal epithelial barrier function; this mechanism involves inactivation of protein tyrosine phosphatase.

**References**


**Caution:** This product is intended for laboratory and research use only. It is not for human or drug use.