

# Evaluation of the cytotoxic activity of different *Artemisia khorasanica* samples on cancer cell lines

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## Abstract

This study was the first to investigate the cytotoxic activity of *Artemisia khorasanica* samples from different places of Razavi khorasan province. Three *A. khorasanica* samples were collected from different places of Iran. Cytotoxicity of their methanol, ethylacetate, dichloromethane and hexan extracts were evaluated on human gastric (AGS), cervica (Hela), colon (HT-29) and breast carcinoma (MCF-7) cell lines by quantitative MTT assay and their growth inhibitory activity was showed as IC<sub>50</sub>. All samples showed toxicity on cancer cells. Dichloromethan extract of sample 1 showed the most strong and all hexan extracts showed the weakest cytotoxicity. MCF-7 was the most sensitive cell line. It was concluded that vegetation of cultivation of this plant in different conditions on various clima could affect its constituents. Also, *A. khorasanica* could be also considered as a promising chemotherapeutic agent in cancer treatment and experiments for isolation and elucidation of their anti-tumoral compounds is udergoing.

## Reaxys Database Information

## Author keywords

AGS; *Artemisia khorasanica*; Cytotoxicity; Hela; HT-29; MCF-7; MTT assay

## Indexed Keywords

**EMTREE drug terms:** acetic acid ethyl ester; *Artemisia khorasanica* extract; cytotoxic agent; dichloromethane; hexane; methanol; plant extract; unclassified drug

**EMTREE medical terms:** antineoplastic activity; *Artemisia*; *Artemisia khorasanica*; article; cancer cell culture; cancer inhibition; cell strain HT-29; cell strain MCF-7; climate; concentration response; controlled study; drug cytotoxicity; female; geographical variation (species); HeLa cell; human; human cell; IC<sub>50</sub>; Iran; quantitative assay; species cultivation

**Chemicals and CAS Registry Numbers:** acetic acid ethyl ester, 141-78-6; dichloromethane, 75-09-2; hexane, 110-04-3; methanol, 67-56-1

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