

# Sitotoksisitas in vitro ekstrak etanol kulit manggis (*Garcinia mangostana* Linn) terhadap sel limfoma Hodgkin = In vitro cytotoxicity test of mangosteen pericarp *Garcinia mangostana* Linn ethanol extract on Hodgkin lymphoma cells

Moch Yasin Friansyah, author

Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=20421206&lokasi=lokal>

---

## Abstrak

[Kanker merupakan salah satu penyebab kematian utama di dunia, termasuk Indonesia. Berbagai penelitian dilakukan untuk mencari alternatif terapi kanker. Kulit manggis dipercaya mempunyai kandungan senyawa yang bersifat sitotoksik terhadap sel kanker. Penelitian ini bertujuan untuk mengetahui efek sitotoksisitas ekstrak etanol kulit manggis terhadap sel limfoma Hodgkin. Ekstrak yang digunakan berasal dari proses ekstraksi kulit manggis dengan pelarut etanol menggunakan Vacuum Rotary Evaporator pada tekanan 1 atm dengan suhu 60o C. Ekstrak kulit manggis diberikan dalam 8 konsentrasi berbeda yaitu 6,25 &#956;g/ml, 12,5 &#956;g/ml, 25 &#956;g/ml, 50 &#956;g/ml, 100 &#956;g/ml, 200 &#956;g/ml, 400 &#956;g/ml, dan 800 &#956;g/ml. Sitotoksisitas dinilai dengan uji MTT-assay untuk mendapat nilai IC50. Hasil penelitian menunjukkan bahwa ekstrak etanol kulit manggis mempunyai efek sitotoksik terhadap sel limfoma Hodgkin dengan nilai IC50 sebesar 5.6 &#956;g/ml. Uji kemaknaan menggunakan uji Kruskal-Wallis menunjukkan nilai  $p = 0.008$  ( $p \ll 0.05$ ). Kesimpulan dari penelitian ini yaitu ekstrak etanol kulit manggis mempunyai efek sitotoksik kuat terhadap sel Limfoma Hodgkin.;Cancer is one of the leading cause of death in the world, including Indonesia. Various studies have been done to seek alternative cancer therapy. Mangosteen pericarp is believed to have substance that are cytotoxic to cancer cells. The purpose of this study is to determine the in vitro cytotoxicity of mangosteen pericarp ethanol extract on Hodgkin Lymphoma cells. The extract used in this study is obtained from the mangosteen pericarp extraction using Vacuum Rotary Evaporator at a pressure of 1 atm and temperature of 60o C. Mangosteen pericarp extract is given in eight different concentration of 6.25 ug / ml, 12.5 pg / ml, 25 mg / ml, 50 pg / ml, 100 pg / ml, 200 mg / mL, 400 mg / ml, and 800 ug / ml. Cytotoxicity was assessed using MTT-assay test to obtain IC50 values. The results showed that ethanol extract of mangosteen pericarp has a cytotoxic effect on Hodgkin lymphoma cells with IC50 value of 5.6 ug / ml. The data were analyzed using Kruskal-Wallis test and had a p value of 0.008 ( $p \ll 0.05$ ). The conclusion of this study is that ethanol extract of mangosteen pericarp has a strong cytotoxic effect on Hodgkin lymphoma cells, Cancer is one of the leading cause of death in the world, including Indonesia. Various studies have been done to seek alternative cancer therapy. Mangosteen pericarp is believed to have substance that are cytotoxic to cancer cells. The purpose of this study is to determine the in vitro cytotoxicity of mangosteen pericarp ethanol extract on Hodgkin Lymphoma cells. The extract used in this study is obtained from the mangosteen pericarp extraction using Vacuum Rotary Evaporator at a pressure of 1 atm and temperature of 60o C. Mangosteen pericarp extract is given in eight different concentration of 6.25 ug / ml, 12.5 pg / ml, 25 mg / ml, 50 pg / ml, 100 pg / ml, 200 mg / mL, 400 mg / ml, and 800 ug / ml. Cytotoxicity was assessed using MTT-assay test to obtain IC50 values. The results showed that ethanol extract of mangosteen pericarp has a cytotoxic effect on Hodgkin lymphoma cells with IC50 value of 5.6 ug / ml. The data were analyzed using Kruskal-Wallis test and had a p value of 0.008 ( $p \ll 0.05$ ). The conclusion of this study is that ethanol extract of mangosteen

pericarp has a strong cytotoxic effect on Hodgkin lymphoma cells]