Reviewer’s report

**Title:** Phenethyl isothiocyanate upregulates death receptors 4 and 5, sensitizes TRAIL-induced apoptosis, and inhibits proliferation in human cancer stem-like cells

**Version:** 4  
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**Reviewer:** Sung-Dae Cho

**Reviewer’s report:**

This study showed that PEITC upregulates death receptors 4 and 5, sensitizes TRAIL-induced apoptosis, and inhibits proliferation in human cancer stem-like cells. Even though some of the data are interesting, the following critiques need to be addressed:

1. The authors used only one specific cell line, HeLa. They need to use another cancer cell line to generalize their conclusion.

2. The title mentioned that PEITC can sensitize TRAIL-induced apoptosis. However, data seems not to represent authors’ description. Figure 3A and 3B showed that the effect of combination therapy of PEITC and TRAIL is less than an additive effect. It suggests that PEITC cannot sensitize TRAIL-induced apoptosis.

3. Please modify experimental designs for Figure 4. Authors’d better use 4 groups as they did it for Figure 3. (control, PEITC treatment only, TRAIL treatment only and combination)

4. In Result section, authors performed only detection of PARP cleavage, but they described caspase-dependent pathway. If authors mentioned it like this, they should detect caspase activity and use caspase inhibitors.

**Level of interest:** An article of limited interest

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

I declare that I have no competing interests