Reviewer's report

Title: Autocrine Regulation of Cell Proliferation by Estrogen Receptor-alpha in Estrogen Receptor-alpha-positive Breast Cancer Cell Lines

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Reviewer: Takashi Suzuki

Reviewer's report:

This manuscript describes autocrine regulation of cell proliferation by ERα in the breast cancer cell lines. In this study, co-localization of ERα with Ki-67 was detected in all three ERα-positive breast cancer cell lines. MCF-7 cells released from ICI182780 treatment remain at G1 phase without E2 stimulation, but E2 stimulation of ICI182780 treated cells promoted the expression and co-localization of ERα and Ki-67 as well as the cell cycle progressing through the S and G2/M phases. Therefore, authors suggested that ERα could mediate estrogen-induced cell proliferation in an autocrine mode in ERα-positive breast cancer cell lines.

Major Compulsory Revisions:

1. In this manuscript, the results are adequately presented and importance of autocrine action by ERα is clearly demonstrated in the breast carcinoma cell lines. However, it still remains unclear why ERα is not necessarily co-localized with Ki-67 in non-neoplastic mammary epithelium or breast carcinoma tissues, which is a main theme in this manuscript. In order to further clarify the importance of autocrine and/or paracrine actions by ERα in the breast tissue, non-neoplastic mammary epithelial cell lines and/or breast carcinoma cells obtained from breast carcinoma tissues should be used as controls of the experiments throughout the manuscript.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests.