Reviewer's report

Title: Changes in Claudin tight junction protein distribution patterns in the progression of mouse skin tumorigenesis

Version: 1 Date: 24 July 2007

Reviewer: Karen Swisshelm

Reviewer's report:

General
This is an interesting, first report of claudin protein relocating (to a possible de-differentiated state) during the classical skin carcinogenesis model. Although there is no mechanistic data provided, this manuscript should be of general interest to the cancer community. The role of the claudin proteins in many cancers is expanding, with elevations, diminuition, and recollation reported for the various claudins in different carcinomas.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

The authors should indicate how many animals were used for each time point in the Methods.

It is important that the authors include the catalog number for the primary antibodies used, i.e. to assure that they are appropriate for use in mouse, and so that other investigators could use to repeat the experiments.

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

All of these pertain to Figures & legends:

Fig. 1. Is this "gross" skin in 1F? If so indicate. Also provide magnification for this and the IF images.

Fig. 3. Please provide specific magnifications. For last sentence in legend, please provide corresponding arrows on images, i.e. pointing to cells where "CLDN localization was more cytoplasmic" and for "Cldn-null epidermal cells".

Discretionary Revisions (which the author can choose to ignore)

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions
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 I have no competing interests.