Reviewer's report

Title: Detection of allele specific difference of IL28B mRNA expression

Version: 2 Date: 2 October 2013

Reviewer: Masaya Sugiyama

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Comments to the author

Knapp et al. reported a methodology on allele specific quantification of IL28B mRNA. The author focused on rs4803217 SNP to distinguish the mRNA levels expressed by each allele. The SNP showed strongly linkage disequilibrium (LD) with rs12979860 and rs8099917, which were associated with the response to chronic hepatitis C treatment based on interferon. Several previous reports were detected the IL28B mRNA produced by both alleles. The present assay is unique and could provide new insight to this filed. However, there are some concerns about the paper.

Major
1. LD block around IL28B is dependent on population group. As revealed in HapMap Database, Asian population shows most strong LD approximately r^2=0.9, following Caucasian population approximately r^2=0.7-0.8. The LD block of African population is different from that of these two populations, approximately r^2=0.4. The author should discuss the limitation of this method.

2. The fixed characteristic of allele-type specific expression was not observed in the present study. The author should discuss that the mRNA expression of samples with homozygote could also change in each allele.

3. Introduction section: The author described the HCV treatment in introduction section. The discussion section shall maintain compatibility with introduction section.

4. Raji cells have shown distinctive profile on IL28A, B, and 29 expressions. Sugiyama et al. Hepatol Res 2012 shall be cited and discussed on the present data.

minor
5. Line 19, page8: Please show the evidence of “3-30%” in detail.

6.

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.