Reviewer’s report

Title: Fas Activated Serine-Threonine Kinase Domains 2 (FASTKD2) mediates apoptosis of breast and prostate cancer cells through its novel FAST2 domain

Version 2
Date: 12 May 2014
Reviewer: Paul Anderson

Reviewer’s report:

Das et al show that the NRIF3/DIF-1/FASTKD2 pathway previously found to trigger apoptosis in breast cancer cells has similar effects in prostate cancer cells. This finding is important because it extends the range of this newly described death program and makes the components of this program targets for the development of a new class of anti-cancer drug.

The experiments are well-controlled and the data are convincing. The authors should address the following points:

1. Figures 1, 2, 3, 5 and 6 should include size markers.
2. The quality of the micrograph shown in Figure 2 is relatively poor. It does not clearly show AIF-GFP at mitochondria. An improved Figure should be included in the revised manuscript.
3. The bystander effect whereby cells not transfected with FASTKD2 undergo apoptosis is interesting, but also raises concerns about the health of these cultures.
4. Does conditioned medium from FASTKD2 transfected cells induce apoptosis in naïve cells?

P values should be reported in experiments showing means and standard errors from independent biological replicates (Fig. 4B, 4C)

Minor essential revisions:
1. There are many typos and grammatical errors that should be corrected.

Level of interest: An article of importance in its field

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

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

I declare that I have no competing interests.