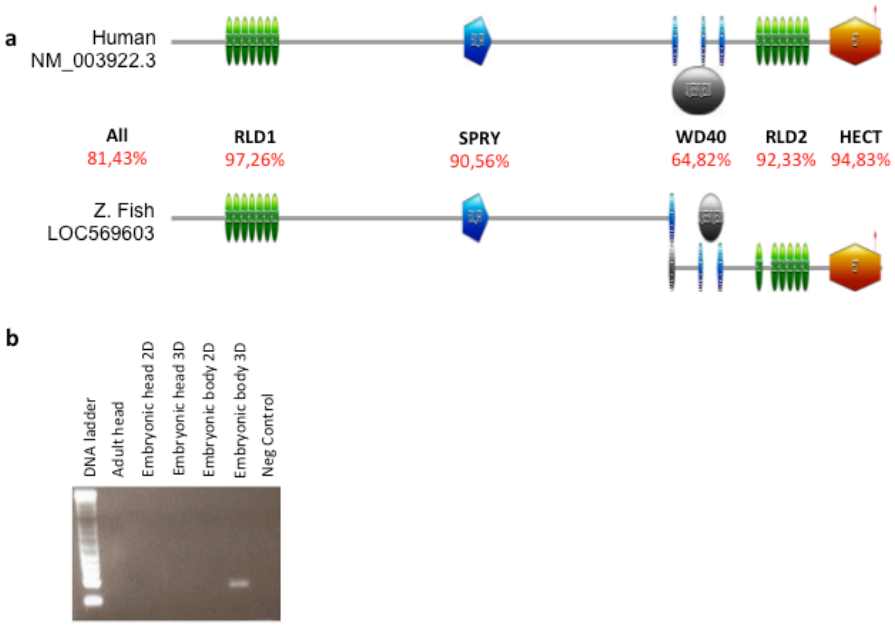
Supplementary Information

In zebrafish, there are two orthologous loci (*LOC569603* and *LOC567670*) of the *HERC1* gene in human. The *LOC569603* locus shares higher nucleic acid conservation with the human *HERC1* (Overall 81,4%, Supplementary Figure 1a) than the *LOC567670* loci (overall 53% nucleic acid conservation, result not shown). Expression of both loci was examined by RT-PCR in the head and the body of zebrafish embryo 2 and 3 days post fertilization as well as in the head of the adult using 2 pairs of primers targeting the 5' and 3' end of the transcript. The expression of *LOC567670* was not detected at any stage of development, suggesting that this locus is not functional in zebrafish (result not shown). The expression of *LOC569063* can be detected only in the body of zebrafish embryo 3 days post fertilization (Supplementary Figure 1b), suggesting functional divergence between the human and the zebrafish protein.



Supplementary Figure 1: Conservation and expression of *herc1* zebrafish ortholog. (a) Nucleic acid conservation between the human *HERC1* transcript (NM_003922.3) and its zebrafish ortholog (LOC56903). Domain search was performed using Prosite (Expasy), and pairwise comparison of the whole transcript or specific domain was done using Clustal Omega tool (EBI). (b) Expression of *LOC569603* is visible only in the embryonic body 3 days post fertilization. RT-PCR was performed using primers targeting the HECT domain of the human and zebrafish transcripts.