

Supplementary Table 1 Zebrafish Rad54 has DNA dependent ATPase activity comparable to that of the human enzyme .

DNA dependent ATPase	hsRad54 full length	hsRad54 Δ 1-94	dnRad54 Δ 1-91
k_{cat} (ATP sec ⁻¹)	33 sec ⁻¹	76 sec ⁻¹	192 sec ⁻¹
K_M (double stranded plasmid)	0.7 μ M	1.98 μ M	2.35 μ M

The reactions was carried out at 25 °C in standard buffer containing 25 mM Tris-HCl (pH 7.5), 4 mM ATP, 4 mM MgCl₂, 0.2 mM DTT with 2.5 mM phosphoenolpyruvate, pyruvate kinase (20 U/ml), lactate dehydrogenase (20 U/ml), 0.32 mM NADH, and 10% glycerol, Rad54 (dnRad54 Δ N) protein (0.2 μ M) and increasing amounts of dsDNA (pBluescript SK(+)) and ATP hydrolysis was monitored spectrophotometrically.