The cancer-associated, gain-of-function TP53 variant P152Lp53 activates multiple signaling pathways implicated in tumorigenesis

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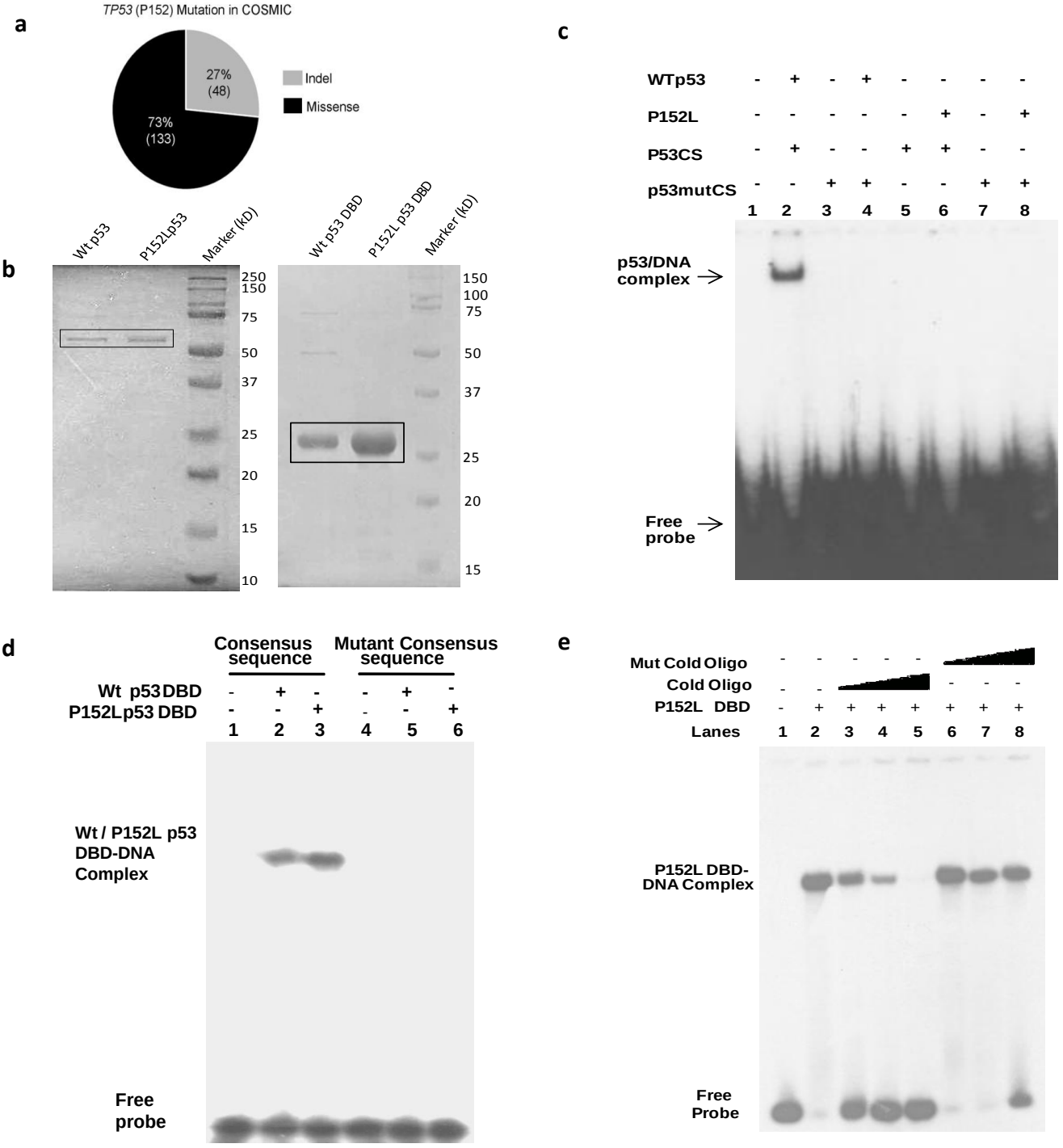
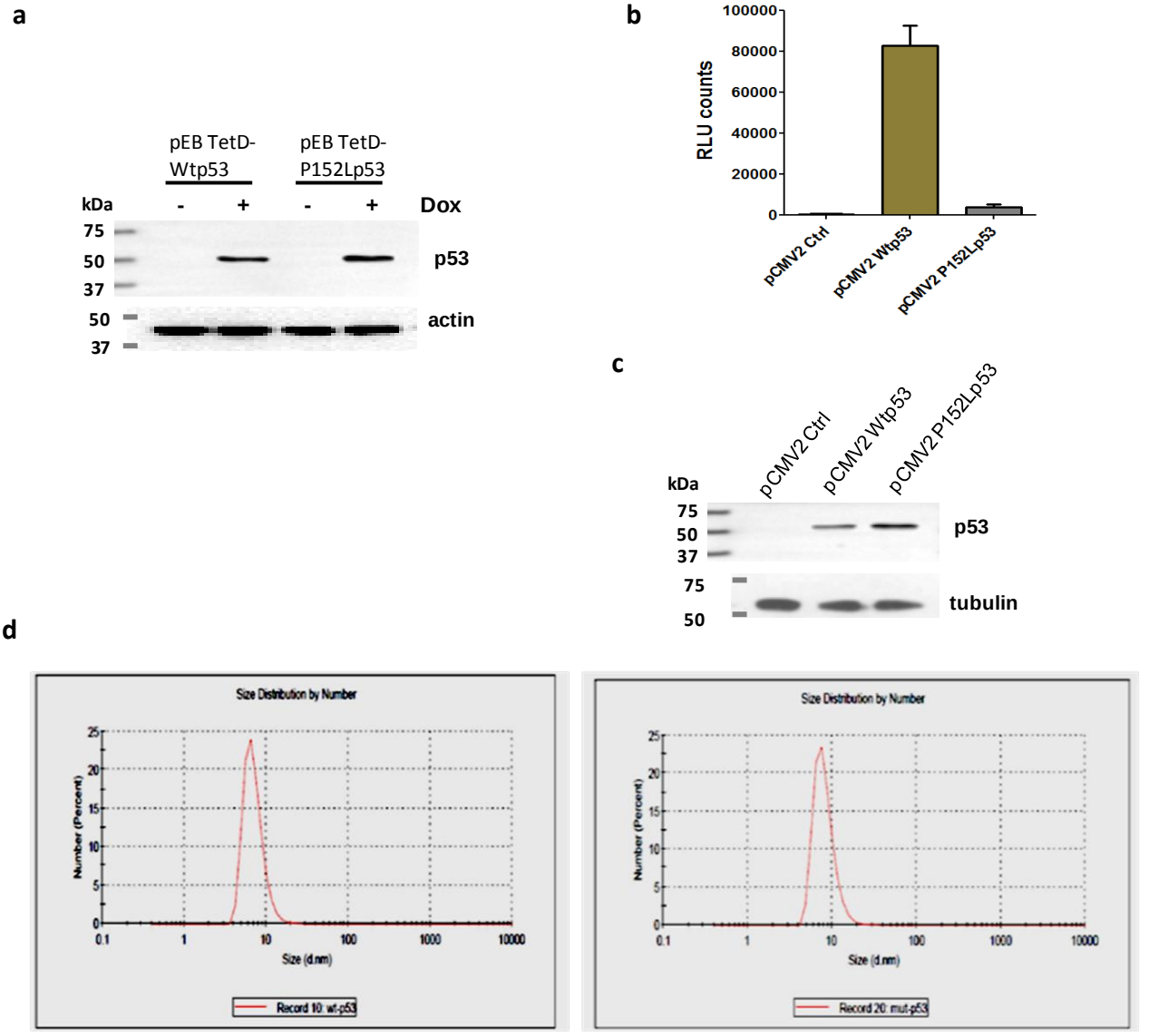
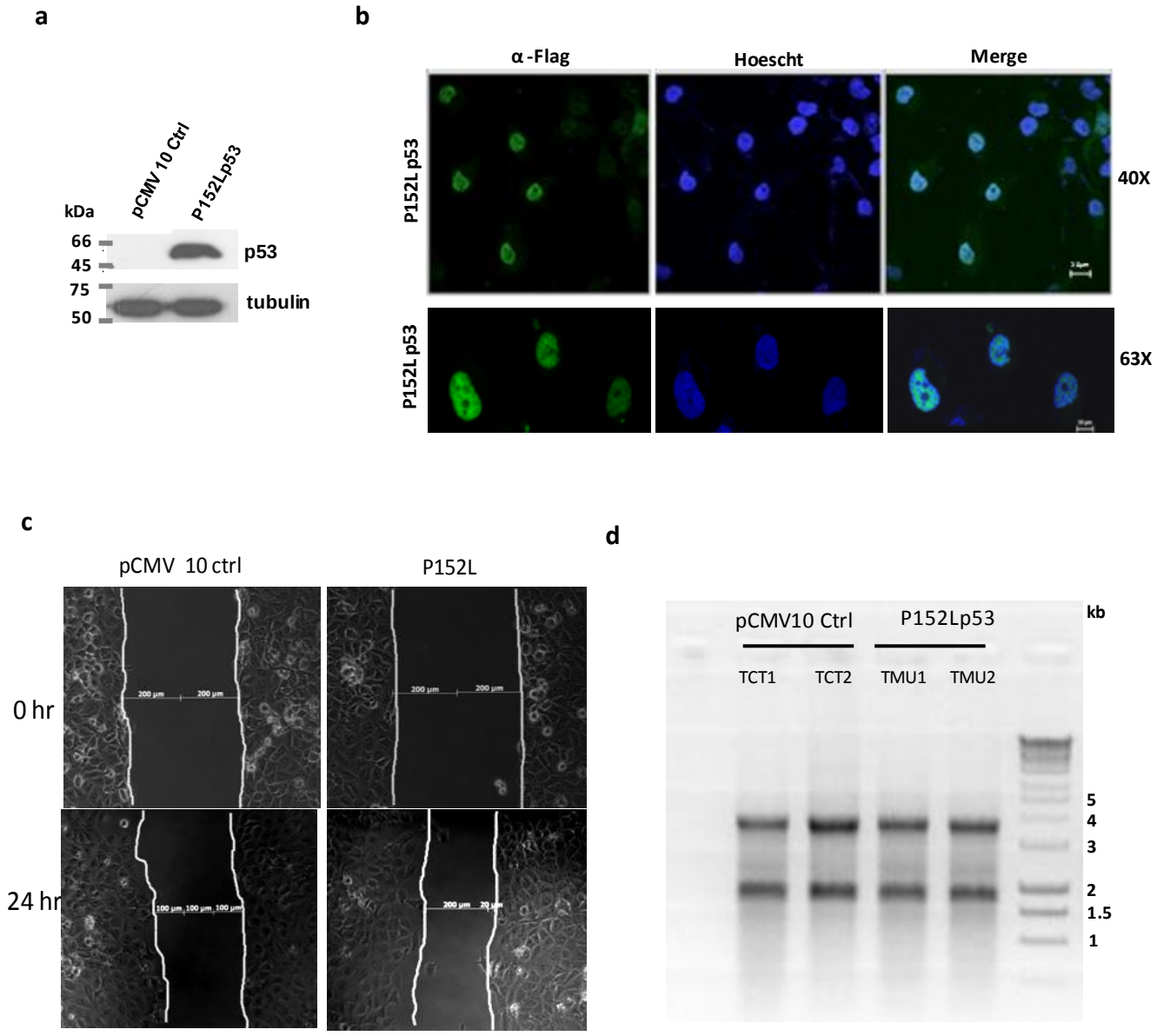


Supplementary Figure S1 : (a) The pie chart representation of number and percentage frequency of mutation type occurring in COSMIC db at amino acid residue P152 in *TP53* **(b)** Purification profile of flag tagged full-length and untagged DNA binding domain of wild type p53 and P152Lp53 purified through M2 agarose affinity purification and SP Sepharose cation exchange affinity chromatography respectively, **(c)** Electrophoretic mobility shift assay showing the abrogation of DNA binding property of recombinant full-length P152Lp53 on *GADD45A* promoter consensus sequence , **(d)** EMSA showing the DNA binding property of DNA binding domain (DBD) of wild type and P152Lp53 with *GADD45A* consensus and mutant consensus sequence, **(e)** EMSA showing cold competition assay of DNA binding domain (DBD) of P152Lp53 with both *GADD45A* consensus and mutant consensus sequence



Supplementary Figure S2 : (a) Immunoblot confirmation of the expression of wtp53 and P152Lp53 upon doxycycline treatment in H1299 Dox inducible stable cell lines, **(b)** Luciferase assay by transient co-transfection of wtp53, P152Lp53 and PG13luc in H1299 cells (n=3). Values are mean ± S.D. **(c)** Immunoblot confirmation of protein expression after transient cotransfection of plasmids in luciferase assay, **(d)** Measurement of Hydrodynamic radii of wild-type (left) and P152L (Right) p53. The wild-type p53 has a hydrodynamic radius of 35.5 Å and the mutant p53 has a radius of 40.9 Å.



Supplementary Figure S3 : (a) Western blot confirmation of P152Lp53 in H1299 stable cell line and vector control, **(b)** Confirmation of P152Lp53 stable expression in H1299 cells and its predominant nuclear localization **(c)** Representative images of the wound healing assay showing the migration of H1299 cells stably expressing P152Lp53 compared to vector (pCMV10) control, **(d)** Agarose gel image of the total RNA isolated from control and mutant tumor for RNA sequencing.