

Corrigendum

La-related protein 1 (LARP1) repression of TOP mRNA translation is mediated through its cap-binding domain and controlled by an adjacent regulatory region

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In Figure 3A, the authors inadvertently duplicated the input levels of two different FLAG-tagged LARP1 fragments.

A new figure is provided below, and the published article has been updated.

This error does not affect the results or conclusion of the article.

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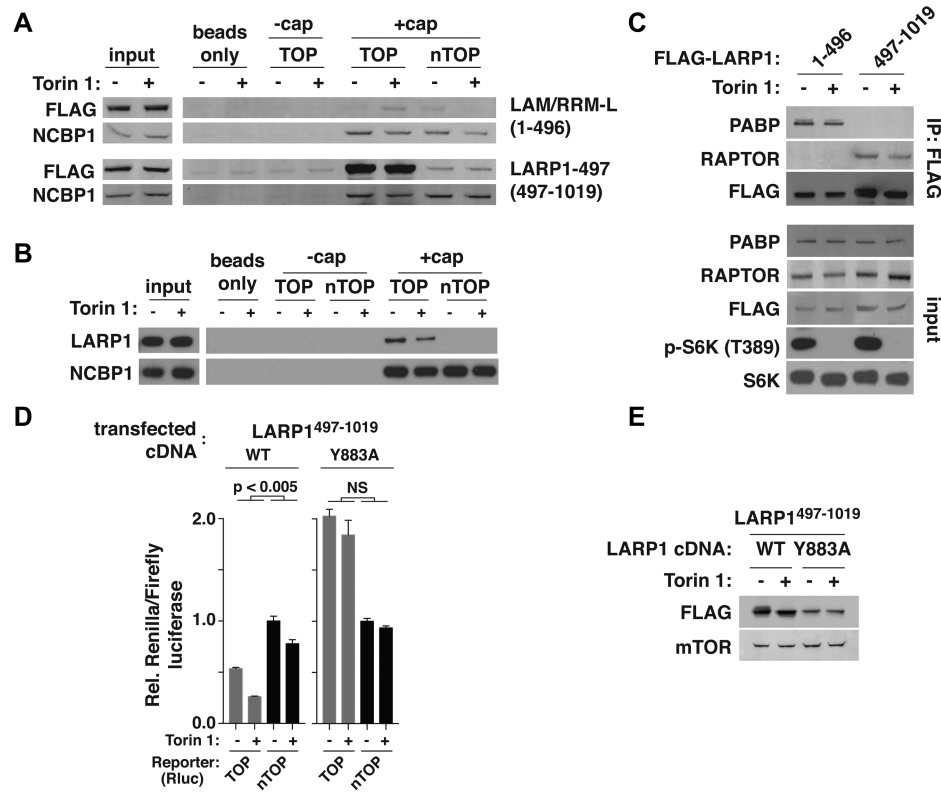


Figure 3. The C-terminal half of LARP1 selectively binds TOP sequences and the adjacent cap structure. **(A)** LARP1⁴⁹⁷⁻¹⁰¹⁹ selectively recognizes oligopyrimidine RNA sequences and the 5' cap structure. Extracts were prepared from LARP1-null HEK-293T cells expressing either FLAG-tagged LARP1⁴⁹⁷⁻¹⁰¹⁹ or an N-terminal fragment (1-496) and treated with vehicle (DMSO) or 250 nM Torin 1 for 2 h. Extracts were then incubated with TOP or non-TOP (nTOP) 10 nt RNAs that were either capped or uncapped and containing a 3' biotin. RNAs were then isolated using streptavidin-coated beads and analyzed by western blotting for the indicated proteins. **(B)** Endogenous LARP1 selectively recognizes capped oligopyrimidine RNA sequences. Extracts were prepared from WT HEK-293T cells treated with DMSO or 250 nM Torin 1 for 2 h, and then incubated with TOP or non-TOP (nTOP) 10 nt RNA probes that were either capped or uncapped and contained a 3' biotin. RNA probes were isolated as in (A) and analyzed by western blotting for the indicated proteins. **(C)** LARP1⁴⁹⁷⁻¹⁰¹⁹ fails to interact with PABP. Extracts were prepared from LARP1-null HEK-293T cells expressing either FLAG-tagged LARP1⁴⁹⁷⁻¹⁰¹⁹ or an N-terminal fragment (1-496) and treated with vehicle (DMSO) or 250 nM Torin 1 for 2 h. FLAG-tagged proteins were then isolated by FLAG-affinity purification in the presence of RNase A, and analyzed by western blotting for the indicated proteins. **(D)** LARP1 mutation that disrupts cap binding prevents TOP mRNA regulation. LARP1-null HEK-293T cells were transfected with the indicated LARP1 cDNAs, along with TOP and non-TOP (nTOP) reporters as in Figure 1D, treated with vehicle (DMSO) or 250 nM Torin 1 for 6 h, and then analyzed for levels of Renilla and firefly luciferase. Data are Renilla/firefly, normalized to vehicle-treated nTOP levels for each LARP1 construct ($n = 3$, error bars are SD). **(E)** Expression levels of LARP1⁴⁹⁷⁻¹⁰¹⁹ WT and Y883A fragments. Cell extracts from cells treated as in (D) were analyzed by western blotting for the indicated proteins.