Nucleolin interacts with telomerase[1].

Khurts S, Masutomi K, Delgermaa L, Arai K, Oishi N, Mizuno H, Hayashi N, Hahn W, Murakami S.

Telomerase is a specialized reverse transcriptase composed of core RNA and protein subunits that plays essential roles in maintaining telomeres in actively dividing cells. Recent work indicates that telomerase shuttles between subcellular compartments during assembly and in response to specific stimuli. In particular, telomerase co-localizes with nucleoli in normal human fibroblasts. Here, we show that nucleolin, a major nucleolar phosphoprotein, interacts with telomerase and alters its subcellular localization. Nucleolin binds hTERT through interactions with its RNA-binding domain 4 and carboxyterminal RGG domain, and this binding also involves the telomerase RNA subunit *hTERC*. The protein-protein interaction between nucleolin and hTERT is critical for the nucleolar localization of hTERT. These findings indicate that interaction of hTERT and nucleolin participates in the dynamic intracellular localization of telomerase complex.

Reference 1: Khurts S, Masutomi K, Delgermaa L, Arai K, Oishi N, Mizuno H, Hayashi N, Hahn W,Murakami S. (2004) J Biol Chem, 279: 51508-51515.

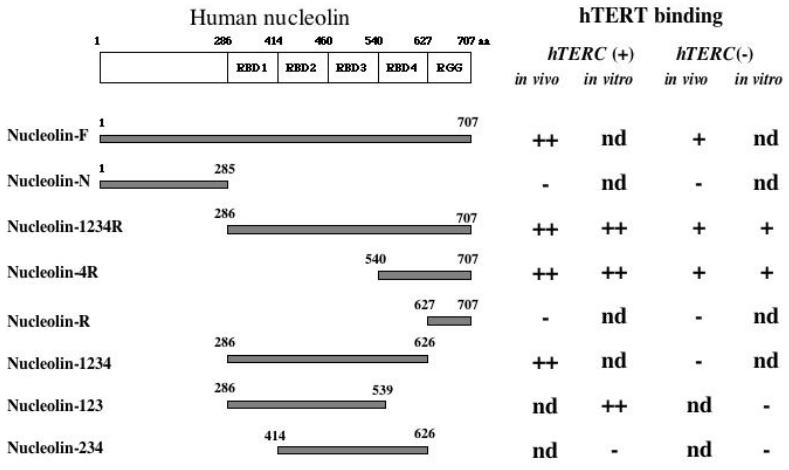

Figure illustrates the hTERT-binding region delineated by *in vivo* and *in vitro* with GST pull-down experiments[1].