عنوان مقاله:

The comparison of interactions between lncRNAs MEG۳ and lnc-EFNB۳-۱ with P۵۳

محل انتشار:

چهارمین کنگره بین المللی و شانزدهمین کنگره ملی ژنتیک (سال: 1399)

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خلاصه مقاله:

Background and Aim: P۵۳ tumor suppressor protein plays a crucial role in the regulation of the cell cycle. Previous studies suggested that multiple long noncoding RNAs (lncRNAs) regulate the P۵۳ pathway. Maternally expressed gene ۳ (MEG۳) and lnc-EFNB۳-۱ are two lncRNA that could interact with P۵۳ and regulate p۵۳ target gene expression. Although the interaction of these lncRNAs with P۵۳ is well established, their interaction mode remains unclear. The present study aims to compare the interaction of MEG۳ and lnc-EFNB۳-۱ with P۵۳ using docking approaches.Methods: The structure of P۵۳ was downloaded from the protein data bank (PDB). The RNAalifold webserver was used to obtain ۲D structure of MEG۳ and lnc-EFNB۳-۱ from their sequences. For converting ۲D to ۳D structures, the RNAComposer webserver was used. Finally, the docking process of lncRNAs with P۵۳ were done by HDOCK Server.Results: The docking score energies of MEG۳ and lnc-EFNB۳-۱ were -۳۵۲ and -۳۴۲, respectively.Conclusion: MEG۳ has a more stable interaction than lnc-EFNB۳-۱ with P۵۳. Therefore, it is predicted that MEG۳ can perform its regulatory roles better in comparison to lnc-EFNB۳-۱. We suggest supplementary studies like expression analysis to characterize their probable interferences.

کلمات کلیدی:
P۵۳, lncRNAs, MEG۳, lnc-EFNB۳-۱

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