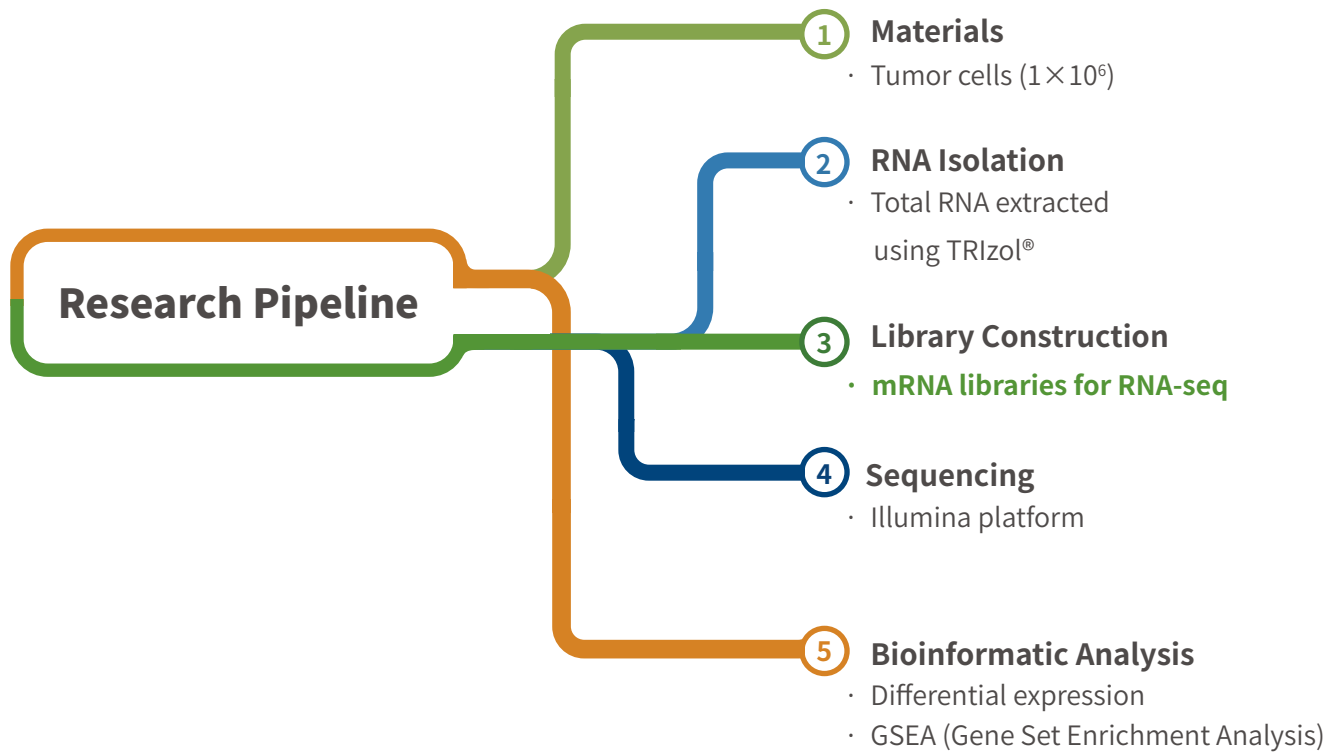


# Armadillo Repeat Containing 12 Promotes Neuroblastoma Progression Through Interaction with Retinoblastoma Binding Protein 4

## Background

Armadillo (ARM) family proteins play an important role in tumor progression. This paper identified *ARMC12* as an ARM member associated with neuroblastoma progression.



## Research Results

- Armadillo repeat containing 12 (*ARMC12*), an ARM member associated with NB progression, promotes the growth and aggressiveness of NB cell lines.
- Mechanistically, *ARMC12* physically interacts with retinoblastoma binding protein 4 (RBBP4) to facilitate the formation and activity of polycomb repressive complex 2 (PRC2), resulting in transcriptional repression of tumor suppressive genes.
- Blocking the interaction between *ARMC12* and RBBP4 by cell-penetrating inhibitory peptide activates downstream gene expression and suppresses the tumorigenesis and aggressiveness of NB cells. Both *ARMC12* and *RBBP4* are upregulated in NB tissues, and are associated with unfavorable outcomes for patients.

## Reference

Subramanian, A. *et al.* Gene set enrichment analysis: A knowledge-based approach for interpreting genome-wide expression profiles. *Proc. Natl. Acad. Sci.* USA 102, 15545–15550 (2005).

## Novogene Powered Publications

Year	Journal	Title
2019	<i>Cell Host &amp; Microbe</i>	Drosophila histone demethylase KDM5 regulates social behavior through immune control and gut microbiota maintenance
2019	<i>Nature communications</i>	Hematopoietic PBX-interacting protein mediates cartilage degeneration during the pathogenesis of osteoarthritis
2019	<i>Nature Communications</i>	Therapeutic role of miR-19a/19b in cardiac regeneration and protection from myocardial infarction
2019	<i>Science Advances</i>	The prostate cancer risk variant rs55958994 regulates multiple gene expression through extreme long-range chromatin interaction to control tumor progression
2019	<i>New Phytologist</i>	Diacylglycerol kinase and associated lipid mediators modulate rice root architecture
2019	<i>Environmental Science &amp; Technology</i>	Study of the persistence of the phytotoxicity induced by graphene oxide quantum dots and of the specific molecular mechanisms by integrating omics and regular analyses
2018	<i>Nature communications</i>	Armadillo repeat containing 12 promotes neuroblastoma progression through interaction with retinoblastoma binding protein 4
2018	<i>cell</i>	Targeting epigenetic crosstalk as a therapeutic strategy for EZH2-aberrant solid tumors
2018	<i>Cancer research</i>	E6 protein expressed by high-risk HPV activates super-enhancers of the <i>EGFR</i> and <i>c-MET</i> oncogenes by destabilizing the histone demethylase KDM5C

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### Novogene Corporation Inc.

8801 Folsom Blvd #290, Sacramento, CA 95826  
 916-252-0068-383 inquiry\_us@novogene.com en.novogene.com

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