

Hsa-miR-153 Probe

Catalog No. FM153-25

Description: one vial of 0.3 mL of probe in hybridization buffer

Intended Use:

This probe is intended for research use only.

Principle:

MicroRNAs (miRNAs) are endogenous, non-coding small RNA molecules that play important role in controlling gene expression. They are involved in multiple biological functions and disease progression including cancer. miRNAs either act as tumor suppressors or oncogenes depending on function of their target gene. Aberrant expression of miRNA has been reported in different cancer types; hence, *in situ* detection of miRNA provides important insight for diagnosis, prognosis, and disease management. There is a significant and novel contribution of upregulated miR-153 in colorectal cancer. High throughput functional studies have revealed that miR-153 upregulation promoted colorectal cancer invasiveness by indirectly initiating matrix metalloprotease enzyme 9 production. While increased resistance to oxaliplatin and cisplatin drugs, both *in vitro* and *in vivo*, by directly mediating the inhibition of the Forkhead transcription factor Forkhead box O3a. In addition, recent studies have revealed that overexpression of miR-153 in prostate cancer cells enhanced the G1/S transitional promoter, cyclin D1 expression, and decreased cyclin-dependent kinase inhibitor, p21(Cip1) expression via downregulation of PTEN tumor suppressor gene and activated AKT signaling.

Please visit the following link for more information about Hsa-miR-153. <http://www.ncbi.nlm.nih.gov/gene/406944>

Summary and Explanation

miRNAs play an important role in many biological processes, including differentiation and development, cell signaling, and response to infection. Recent research have shown that human miRNA genes are frequently located in cancer-associated genomic regions, while perturbed miRNA expression patterns have been observed in many human cancers. A number of oncogenes and tumor suppressor genes were found to be the targets of miRNAs and global miRNA expression signatures were able to distinguish cancerous and non-cancerous tissues. Therefore, miRNA profiles can serve as highly specific markers for diagnosis, prognosis, disease monitoring, as well as prediction of therapeutic response. miRNAs are remarkably stable molecules and are well preserved in formalin-fixed, paraffin-embedded (FFPE) as well as frozen specimens. Early diagnosis, detection, and assessment of the disease progression are essential for disease management, especially in tumor patients, where timely therapeutic interventions are extremely critical.

Quality Control

This product is quality control tested at BioGenex according to the suggested procedure. The recommended positive control tissue(s) for this miRNA probe are ca.colon and TCC (FB-HM153).

Recommended protocol and parameters for Hsa-miR-153 probe

Automated Protocol:

<https://omicsveu.com/wp-content/uploads/Brochures/914-0071.0.pdf>

Manual Protocol:

<https://omicsveu.com/wp-content/uploads/Brochures/914-0072.0.pdf>

For more information:

<https://omicsveu.com/wp-content/uploads/Brochures/914-0073.0.pdf>

Bibliography

- <https://doi.org/10.1002/emmm.201100209>
- <https://doi.org/10.1186/1423-0127-19-90>
- <https://doi.org/10.1016/j.ymeth.2007.10.008>
- [10.1007/978-1-60761-657-3_18](https://doi.org/10.1007/978-1-60761-657-3_18)
- [10.1007/s13238-013-3001-5](https://doi.org/10.1007/s13238-013-3001-5)
- [10.1261/rna.2006511](https://doi.org/10.1261/rna.2006511)
- <https://doi.org/10.1007/s11515-011-0990-4>
- [10.1158/0008-5472.CAN-12-3308](https://doi.org/10.1158/0008-5472.CAN-12-3308)
- [10.1002/pros.22600](https://doi.org/10.1002/pros.22600)

	Temperature Limitation	RUO	For Research Use Only
	Use By Date	LOT	Batch Code
	Non-Sterile		Consult Instructions for Use
REF	Catalogue Number		BioGenex

Distributed by: omicsveu

Omicsveu is a distributor company offering the true spatial multi-omics platform & reagents.

Address: 48810 Kato Road, Suite 100E & 200E

Fremont, CA 94538, USA

Tel: +1 (800) 421-4149

Contact: customerservice@omicsveu.com