

## Hsa-miR-381 Probe

Catalog No. FM381-25

**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. Recent functional studies have demonstrated that miR-381 serves as a tumor suppressor and is associated with radio-sensitivity in cancer cells. Overexpression of miR-381 confers increased radio-sensitivity of esophageal squamous cell carcinoma (ESCC) cells, promotes nonaggressive phenotype, and growth inhibition in radio-resistant ESCC and lung adenocarcinoma cells. miR-381 exerts its biological functions through the regulation of various target genes such as MITE, LRR4, ID1, MDR1, BRD7, and WEE1. These data indicate that it is a valuable radio resistance-associated biomarker and a promising therapeutic target for treatment of radio resistant tumors.

Please visit the following link for more information about Hsa-miR-381. <http://www.ncbi.nlm.nih.gov/gene/494330>

### 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 TCC and breast (FB-HM381).

### Recommended protocol and parameters for Hsa-miR-381

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### 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

1. [10.1002/emmm.201100209](https://doi.org/10.1002/emmm.201100209)
2. [10.1186/1423-0127-19-90](https://doi.org/10.1186/1423-0127-19-90)
3. [10.1016/j.ymeth.2007.10.008](https://doi.org/10.1016/j.ymeth.2007.10.008)
4. [10.1007/978-1-60761-657-3\\_18](https://doi.org/10.1007/978-1-60761-657-3_18)
5. [10.1007/s13238-013-3001-5](https://doi.org/10.1007/s13238-013-3001-5)
6. [10.1261/rna.2006511](https://doi.org/10.1261/rna.2006511)
7. [10.1007/s11515-011-0990-4](https://doi.org/10.1007/s11515-011-0990-4)
8. [10.1097/JTO.0b013e31824fe976](https://doi.org/10.1097/JTO.0b013e31824fe976)

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

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