

Supplemental 1 The prediction process by using Diana online database (<http://diana.imis.athena-innovation.gr/DianaTools/index.php>).

The screenshot displays the Diana online database website. At the top, there is a navigation bar with buttons for HOME, SOFTWARE, PUBLICATIONS, and CONTACT. Below this is a section titled WEB SERVICES. The main content area is titled WEB APPLICATIONS and contains several boxes for different tools:

- microCLIP**: An AGO-CLIP-guided algorithm for the identification of transcriptome-wide miRNA-target interactions.
- TarBase v.8 - NEW!**: A database of experimentally supported miRNA:gene interactions.
- microT-CDS - UPDATED!**: Search for targets of annotated miRNAs based on the popular microT-CDS algorithm. (A red arrow points to this box.)
- MirPath v.3**: A miRNA pathway analysis Web server.
- LncBase v.2**: Elaborated info for predicted & exp. verified miRNA-lncRNA interactions.
- Automated Pipelines**: Pipelines to analyse user data from small scale & high-throughput experiments.
- MR-microT (beta) UPDATED!**: Near-real time miRNA target prediction on the Cloud.
- mirPub**: Search for miRNA-related publications.
- miRGen v.3**: Accurate characterization of miRNA promoters & their regulators.

Below the applications, there is a blue box with the text "Please cite:" followed by two references:

- Paraskevopoulou MD, Georgakilas G, Kostoulas N, Vlachos IS, Vergoulis T, Reczko M, Filippidis C, Dalamaga T, Hatzigeorgiou AG., "DIANA-microT web server v5.0: service integration into miRNA functional analysis workflows.", *Nucleic Acids Res.* 2013 Jul;41(Web Server issue):W169-73.
- Reczko M, Maragkakis M, Alexiou P, Grosse I, Hatzigeorgiou AG., "Functional microRNA targets in protein coding sequences.", *Bioinformatics.* , 2012 Jan 27.

At the bottom, there is a search bar with a magnifying glass icon.

Input hsa-miR-31-5p

hsa-mir-31-5p Filters

Results: 613 targets for miRNAs hsa-mir-31-5p. Threshold is set to 0.7.

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	Ensembl Gene Id	miRNA name	miTG score	Also Predicted
1	ENSG00000081019 (RSBN1)	hsa-miR-31-5p	0.999669962080703	☐ ☒
2	ENSG00000154153 (FAM134B)	hsa-miR-31-5p	0.995877082251133	☐ ☒
3	ENSG00000206538 (VGLL3)	hsa-miR-31-5p	0.993117821514463	☐ ☒
4	ENSG00000198099 (ADH4)	hsa-miR-31-5p	0.992635702280889	☐ ☒
5	ENSG00000156103 (MMP16)	hsa-miR-31-5p	0.991693659481738	☐ ☒
6	ENSG00000213214 (ARHGEF35)	hsa-miR-31-5p	0.991516016308427	☐ ☒
7	ENSG00000072422 (RHOTB1)	hsa-miR-31-5p	0.990425116188636	☐ ☒
8	ENSG00000243943 (ZNF512)	hsa-miR-31-5p	0.989320417115851	☐ ☒

Input TIMP3

hsa-mir-31-5p TIMP3

Results: 613 targets for miRNAs hsa-mir-31-5p. Threshold is set to 0.7.

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	Ensembl Gene Id	miRNA name	miTG score	AI
1	ENSG00000081019 (RSBN1)	hsa-miR-31-5p	0.999669962080703	
2	ENSG00000154153 (FAM134B)	hsa-miR-31-5p	0.995877082251133	
3	ENSG00000206538	hsa-miR-31-5p	0.993117821514463	

