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**Figure S1.** ROC curves of tRNA-Val.ROC curve of the tRNA-Val for HCA (n=5) vs. ctrl (n=6). Ctrl; control, HCA; Hepatocellular adenoma, EVs; Extracellular vesicles.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Number** | **Age** | **Disease** | **Sex** | **Castration/Spay** | **Breed** | **Tissue** | **Plasma** |
| P1 | 11 Y 3 M | HCA | M | Yes | Mongrel | 15 | 5 |
| P2 | 8 Y 1M | HCA | F | Yes | Miniature dachshund |
| P3 | 10 Y 7 M | HCA | M | Yes | Toy poodle |
| P4 | 12 Y 2 M | HCA | F | Yes | Shiba |
| P5 | 11 Y 6 M | HCA | M | No | Miniature dachshund |
| P6 | 12 Y 3 M | HCA | M | No | Miniature dachshund |
| P7 | 11 Y 9 M | HCA | M | No | Mongrel |
| P8 | 13 5 M | HCA | F | Yes | Miniature dachshund |
| P9 | 14 Y | HCA | M | No | Golden retriever |
| P10 | 9 Y 2 M | HCA | F | Yes | Toy poodle |
| P11 | 13 Y | HCA | F | Yes | Jack Russell terrier |
| P12 | 11 Y 1 M | HCA | M | No | Miniature dachshund |
| P13 | 12 Y 2 M | HCA | M | No | Mongrel |
| P14 | 12 Y 3 M | HCA | M | No | Mongrel |
| P15 | 10 Y 7 M | HCA | M | No | Shiba |
| P16 | 12 Y 3 M | HCC | F | No | Chihuahua | 13 | 9 |
| P17 | 11 Y 3 M | HCC | F | Yes | Miniature dachshund |
| P18 | 14 Y | HCC | F | Yes | Mongrel |
| P19 | 10 Y 8 M | HCC | M | Yes | Shiba |
| P20 | 11 Y 7 M | HCC | M | Yes | Welsh corgi |
| P21 | 10 Y 9 M | HCC | F | No | Mongrel |
| P22 | 10 Y 3 M | HCC | F | No | Beagle |
| P23 | 10 Y 9 M | HCC | F | No | Yorkshire terrier |
| P24 | 11 Y 6 M | HCC | M | No | Shiba |
| P25 | 12 Y | HCC | F | No | Miniature schnauzer |
| P26 | 11 Y 10 M | HCC | M | No | Yorkshire terrier |
| P27 | 13 Y 10 M | HCC | F | No | Shetland sheepdog |
| P28 | 11 Y 7 M | HCC | M | Yes | Mongrel |

**Aberrantly expressed tRNA-Val fragments can distinguish canine hepatocellular carcinoma from canine hepatocellular adenoma**

**Table S1.** HCC and HCA patient information.

P; Patient, HCA; Hepatocellular adenoma, HCC; Hepatocellular carcinoma, F; Female; M; Male.

**Table S2.** Targeted genes of tRNA-Val with their seed sequence and binding locations.

|  |  |  |  |
| --- | --- | --- | --- |
| **Gene**  | **Gene name** | **Seed location** | **Predicted target score** |
| SAMD11 | Sterile alpha motif domain containing 11 | 119 | 91 |
| APLF | Aprataxin and PNKP like factor | 40 | 83 |
| SRSF2 | Serine and arginine rich splicing factor 2 | 912 | 81 |
| KDELR2 | KDEL endoplasmic reticulum protein retention receptor 2 | 83 | 73 |
| CDC27 | Cell division cycle 27 | 2938 | 70 |
| ARAP2 | ArfGAP with RhoGAP domain, ankyrin repeat and PH domain 2 | 433, 1631 | 62 |
| MBNL1 | Muscle blind like splicing regulator 1 | 2880 | 54 |
| GTF2H1 | General transcription factor IIH subunit 1 | 628 | 53 |
| UBA3 | Ubiquitin-like modifier activating enzyme 3 | 32 | 53 |
| ATXN1 | Ataxin 1 | 2576 | 50 |
| DCUN1D1 | Defective in cullin neddylation 1 domain containing 1 | 48 | 50 |