

Seq → GTCAGGATGGCCGAGCGGTCTAAGGCGCTGCGTTCAGGTCGCAGTCTCCCCTGGAGGCGTGGGTTCGAAT

Seq	GTCAAGGCGTTCAGGTCGAGTCTCCCGTGGAGCGTGGGTTGCAAT
tRNA-Leu-CAG-1-1	GTCAAGGCGTTCAGGTCGAGTCTCCCGTGGAGCGTGGGTTGCAATCCCACCTCTGACA
tRNA-Leu-CAG-1-2	GTCAAGGCGTTCAGGTCGAGTCTCCCGTGGAGCGTGGGTTGCAATCCCACCTCTGACA
tRNA-Leu-CAG-1-3	GTCAAGGCGTTCAGGCGTTCAGGCGTGGGTTGAGTCGAGTCTCCCGTGGAGCGTGGGTTGCAATCCCACCTCTGACA
tRNA-Leu-CAG-1-4	GTCAAGGCGTTCAGGCGTTCAGGTCGAGTCTCCCGTGGAGCGTGGGTTGCAATCCCACCTCTGACA
tRNA-Leu-CAG-1-5	GTCAAGGCGTTCAGGTCGAGTCTCCCGTGGAGCGTGGGTTGCAATCCCACCTCTGACA
tRNA-Leu-CAG-2-1	GTCAAGGCGTTCAGGTCGAGTCTCCCGTGGAGCGTGGGTTGCAATCCCACCTCTGACA
tRNA-Leu-CAG-2-2	GTCAAGGCGTTCAGGTCGAGTCTCCCGTGGAGCGTGGGTTGCAATCCCACCTCTGACA
tRNA-Leu-CAG-2-3	GTCAAGGCGTTCAGGTCGAGTCTCCCGTGGAGCGTGGGTTGCAATCCCACCTCTGACA

C

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graph TD; A[tRNA-Leu-CAG] --> B[ambiguous]; A --> C[tRNA-Leu-CAG-1]; A --> D[tRNA-Leu-CAG-2]; C --> E[tRNA-Leu-CAG-1-1]; C --> F[tRNA-Leu-CAG-1-2]; C --> G[tRNA-Leu-CAG-1-3]; C --> H[tRNA-Leu-CAG-1-4]; C --> I[tRNA-Leu-CAG-1-5]; D --> J[tRNA-Leu-CAG-2-1]; D --> K[tRNA-Leu-CAG-2-2]; D --> L[tRNA-Leu-CAG-2-3]; M((Seq)) --> B;
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Diagram illustrating the structure of tRNA-Leu-CAG isoacceptor families. The central node is tRNA-Leu-CAG, which branches into two main families: tRNA-Leu-CAG-1 and tRNA-Leu-CAG-2. tRNA-Leu-CAG-1 further branches into five sub-families (tRNA-Leu-CAG-1-1 to tRNA-Leu-CAG-1-5). tRNA-Leu-CAG-2 branches into three sub-families (tRNA-Leu-CAG-2-1 to tRNA-Leu-CAG-2-3). The tRNA-Leu-CAG node is also associated with an ambiguous state, which is linked to a sequence (Seq) node.