|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Modified Residue | | Nearby Variant | | Location | | Association by Literature | | Cardiomyopathy Designation | | Literature Review | | ClinVar (Classification) | |
| K34/ K58 | | R17C | | SH3 | | LP | | HCM | | Alamo et al. 2017 | | --------- | |
| A26V | | SH3 | | P | | HCM | | Van Driest et al. 2004 | | Benign | |
| V39M | | SH3 | | P | | HCM | | Van Driest et al. 2004 | | Conflicting interpretations of pathogenicity | |
| R54X | | SH3 | | P | | HCM | | Van Driest et al. 2004 | | --------- | |
| V59I | | SH3 | | P | | HCM | | Alamo et al. 2017 | | --------- | |
| G181R | | P-Loop | | P/LP | | DCM | | Alamo et al. 2017 | | --------- | |
| R190T | | Near P-Loop | | P | | HCM | | Van Driest et al. 2004 | | --------- | |
| Q193R | | Near P-Loop | | LP | | HCM | | Alamo et al. 2017 | | --------- | |
| A196T | | Near Loop 1 | | P | | HCM | | Woo et al. 2003 | | --------- | |
| A199V | | Near Loop 1 | | LP | | HCM | | Alamo et al. 2017 | | --------- | |
| I201T | | Near 25/50 junction (Loop1) | | P | | DCM | | Uniprot | | Pathogenic/ Likely pathogenic | |
| R204C | | Loop 1 | | P | | HCM | | Alamo et al. 2017 | | --------- | |
| R204H | | Loop 1 | | P | | HCM | | Uniprot | | Conflicting interpretations of Pathogenicity | |
| K207Q | | Loop 1 | | P | | HCM | | Uniprot | | Conflicting interpretations of pathogenicity | |
| P211L | | Loop 1 | | LP | | HCM | | Woo et al. 2003 | | Uncertain significance | |
| G214D | | Loop 1 | | P | | HCM | | Alamo et al. 2017 | | --------- | |
| Q222K | | Near Loop 1 | | P | | HCM | | Van Driest et al. 2004 | | --------- | |
| A223T | | Near Loop 1 | | P | | DCM | | Uniprot | | Uncertain significance | |
| L227V | | Near Switch 1 | | P | | HCM | | Uniprot | | --------- | |
| N232S | | Near Switch 1 | | Benign | | ---- | | Marin-Garcia et al. 2014 | | --------- | |
| N232H | | Near Switch 1 | | P | | HCM | | Alamo et al. 2017 | | --------- | |
| D239N | | Switch 1 | | LP | | HCM | | Alamo et al. 2017 | | --------- | |
| R243H | | Switch 1 | | P | | DCM | | Alamo et al. 2017 | | Conflicting interpretations of Pathogenicity | |
| G245E | | Switch 1 | | P | | DCM | | Alamo et al. 2017 | | --------- | |
| I248F | | Near Switch 1 | | p | | DCM | | Alamo et al. 2017 | |  | |
| K429 | | R403W/G/L/Q | | CM-Loop | | P | | HCM | | Alamo et al. 2017 | | Uncertain significance/ Pathogenic | |
| V406M | | CM-Loop | | LP | | HCM | | Alamo et al. 2017 | | --------- | |
| G407V | | CM-Loop | | LP | | HCM | | Uniprot | | Likely Pathogenic | |
| Y410D | | CM-Loop | | LP | | HCM | | Alamo et al. 2017 | | --------- | |
| V411I | | CM-Loop | | P | | HCM | | Woo et al. 2003 | | Conflicting interpretations of pathogenicity | |
| T412N | | CM-Loop | | P | | DCM | | Villard et al. 2005 | | --------- | |
| G425R | | Near CM-Loop | | P | | HCM | | Uniprot | | Conflicting interpretations of pathogenicity | |
| L427M | | Near CM-Loop | | LP | | HCM | | Alamo et al. 2017 | | --------- | |
| A428V | | Near CM-Loop | | P | | HCM | | Van Driest et al. 2004 | | Likely pathogenic | |
| A430E | | Near CM-Loop | | P | | HCM | | Uniprot | | Likely pathogenic; Uncertain significance. | |
| M435T | | Near Switch 2 | | P | | HCM | | Uniprot | | --------- | |
| V440M | | Upper 50 KDa Domain | | P | | HCM | | Van Driest et al. 2004 | | Conflicting interpretations of pathogenicity | |
| T441M | | Upper 50 KDa Domain | | Benign | | Myopathy | | Uniprot | | Conflicting interpretations of pathogenicity | |
| R442C | | Upper 50 KDa Domain | | P | | HCM | | Alamo et al. 2017 | | --------- | |
| I443T | | Near Switch 2 | | P | | HCM | | Van Driest et al. 2004 | | --------- | |
| T449S | | Near Switch 2 | | LP | | HCM | | Alamo et al. 2017 | | --------- | |
| R453C | | Sequentially Near Switch 2 | | P | | HCM | | Alamo et al. 2017 | | Uncertain significance/ Pathogenic | |
| R453S/H | | Sequentially Near Switch 2 | | LP | | HCM | | Alamo et al. 2017 | | Uncertain significance/ Pathogenic | |
| K951 | | E930K | | Ring 2 | | P | | HCM | | Alamo et al. 2017 | | Pathogenic/Likely Pathogenic | |
| E931K | | Ring 2 | | P | | HCM | | Van Driest et al. 2004 | | --------- | |
| E935K | | Ring 2 | | P | | HCM | | Van Driest et al. 2004 | | Pathogenic | |
| E949K | | Ring 3 | | P | | HCM | | Anan et al. 1994 | | Uncertain significance | |
| D953H | | Ring 3 | | P | | HCM | | Van Driest et al. 2004 | | --------- | |
| L961R | | Near Ring 3 | | P | | HCM | | Van Driest et al. 2004 | | --------- | |
| E967K | | Near Ring 3 | | LP | | HCM | | Alamo et al. 2017 | | --------- | |
| K1195 | | R1193S | | Near Skip 1 | | P | | DCM | | Villard et al 2005 | | Uncertain significance | |
| R1193H | | Near Skip 1 | | P | | DCM | | Alamo et al. 2017 | | --------- | |

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**Supplemental Table 2**