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| Molecular Tumor Report |

| Somatic Mutations in Known Driver Genes | | |
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| **Gene** | **Confidence** | **References** |
| BRAF | 4 | 14993899|23539594|14681372|25759023 |
| SF3B1 | 3 | 14993899|23539594|25759023 |
| DLEC1 | 2 | 23066107|14681372 |
| FAM46C | 2 | 14993899|25759023 |
| GLI1 | 2 | 23066107|14681372 |
| RPS6KA2 | 2 | 23066107|14681372 |
| ACHE | 1 | 23066107 |
| EPHB4 | 1 | 23066107 |
| ETV5 | 1 | 14993899 |
| LPP | 1 | 14993899 |
| MADD | 1 | 23066107 |
| PABPC3 | 1 | 25759023 |
| PCSK5 | 1 | 25759023 |
| TNPO1 | 1 | 25759023 |

| Somatic Mutations in Pharmaceutical Target Proteins | | | | |
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| **Direct Association (Mutation in drug target)** | | | | |
| **Gene** | **Mutation** | **Therapy** | **Confidence** | **References** |
| BRAF | p.Val600Glu | dabrafenib | 4 | 23621583|27910877|PMC4702870 |
| sorafenib | 4 | 16609060|16901402|17575107|16880785|20812347|11752352|27910877|15466206|PMC4702870 |
| vemurafenib | 4 | 23094782|27910877|22808911|PMC4702870 |
| regorafenib | 3 | 27910877|22222036 |
| gsk2118436 | 1 | PMC4702870 |
| r7204 | 1 | PMC4702870 |
| EPHB4 | p.Pro346Leu | vandetanib | 1 | 27910877 |

| **Indirect Association (other Mutations with known effect on drug)** | | |
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| **Gene** | **Therapy** | **References** |
| EPHB4 | Bevacizumab | 23579861 |
| BRAF | Dabrafenib | Dacarbazine | Temozolomide | Trametinib | PD0325901 | Panitumumab | Sorafenib | Vemurafenib | Selumetinib (AZD6244) | GDC0941 | PLX4720 | Nutlin-3 | Capecitabine | Bevacizumab | Cetuximab | Pictilisib | RO4987655 | BAY 86-9766 | BEZ235 (NVP-BEZ235 | Dactolisib) | Cobimetinib | 23031422 | 24586605 | 24576830 | 23325582 | 19001320 | 23524406 | 21098728 | 23020132 | 23463675 | 24583796 | 23845441 | 23812671 | 22180495 | 20619739 | 23890088 | 24345920 | 23715574 | 25370471 | 25989278 | 22169769 | 24947927 | 23434733 | 26678033 | 23934108 |

| Somatic Mutations with known pharmacogenetic effect | | | | | |
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| **Gene** | **Mutation** | **Therapy** | **Disease** | **Evidence** | **Pubmed** |
| BRAF | p.Val600Glu | Dacarbazine,Temozolomide | Melanoma | B | 24586605 |
| p.Val600Glu | Dabrafenib,Trametinib | Melanoma | B | 24583796 |
| p.Val600Glu | Cetuximab | Colorectal Cancer | B | 20619739 |
| p.Val600Glu | Panitumumab,Cetuximab | Colorectal Cancer | B | 25989278 |
| p.Val600Glu | Dabrafenib | Non-small Cell Lung Carcinoma | C | 23524406 |
| p.Val600Glu | Pictilisib | Melanoma | C | 25370471 |
| p.Val600Glu | Trametinib,PD0325901 | Melanoma | D | 24576830 |
| p.Val600Glu | Sorafenib | Colorectal Cancer | D | 19001320 |
| p.Val600Glu | Vemurafenib | Melanoma | D | 24576830 |
| p.Val600Glu | GDC0941,PLX4720 | Colorectal Cancer | D | 23845441 |
| p.Val600Glu | PLX4720,Nutlin-3 | Colorectal Cancer | D | 23812671 |
| p.Val600Glu | Capecitabine,Vemurafenib,Bevacizumab | Colorectal Cancer | D | 22180495 |
| p.Val600Glu | Vemurafenib | Colorectal Cancer | D | 22180495 |
| p.Val600Glu | Selumetinib (AZD6244),BEZ235 (NVP-BEZ235, Dactolisib) | Melanoma | D | 26678033 |
| p.Val600Glu | Cobimetinib | Cancer | D | 23934108 |

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| Disclaimer |

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