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| Molecular Tumor Report |

| Somatic Mutations in Known Driver Genes | | |
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| **Gene** | **Confidence** | **References** |
| BRAF | 4 | 1,2,3,4 |
| SF3B1 | 3 | 1,2,4 |
| DLEC1 | 2 | 3,5 |
| FAM46C | 2 | 1,4 |
| GLI1 | 2 | 3,5 |
| RPS6KA2 | 2 | 3,5 |
| ACHE | 1 | 5 |
| EPHB4 | 1 | 5 |
| ETV5 | 1 | 1 |
| LPP | 1 | 1 |
| MADD | 1 | 5 |
| PABPC3 | 1 | 4 |
| PCSK5 | 1 | 4 |
| TNPO1 | 1 | 4 |

| Somatic Mutations in Pharmaceutical Target Proteins | | | | |
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| **Direct Association (Mutation in drug target)** | | | | |
| **Gene** | **Mutation** | **Therapy** | **Confidence** | **References** |
| BRAF | p.Val600Glu | sorafenib | 9 | 6,7,8,9,10,11,12,13,14 |
| dabrafenib | 4 | 12,14,15 |
| vemurafenib | 4 | 12,14,16,17 |
| regorafenib | 3 | 12,18 |
| gsk2118436 | 1 | 14 |
| r7204 | 1 | 14 |
| EPHB4 | p.Pro346Leu | vandetanib | 1 | 12 |

| **Indirect Association (other Mutations with known effect on drug)** | | |
| --- | --- | --- |
| **Gene** | **Therapy** | **References** |
| 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 | 20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43 |
| EPHB4 | Bevacizumab | 19 |

| Somatic Mutations with known pharmacogenetic effect | | | | | |
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| **Gene** | **Mutation** | **Therapy** | **Disease** | **Evidence** | **References** |
| BRAF | p.Val600Glu | Cetuximab | Colorectal Cancer | B | 33 |
| p.Val600Glu | Dabrafenib,Trametinib | Melanoma | B | 29 |
| p.Val600Glu | Dacarbazine,Temozolomide | Melanoma | B | 21 |
| p.Val600Glu | Panitumumab,Cetuximab | Colorectal Cancer | B | 38 |
| p.Val600Glu | Dabrafenib | Non-small Cell Lung Carcinoma | C | 25 |
| p.Val600Glu | Pictilisib | Melanoma | C | 37 |
| p.Val600Glu | Capecitabine,Vemurafenib,Bevacizumab | Colorectal Cancer | D | 32 |
| p.Val600Glu | Cobimetinib | Cancer | D | 43 |
| p.Val600Glu | GDC0941,PLX4720 | Colorectal Cancer | D | 30 |
| p.Val600Glu | PLX4720,Nutlin-3 | Colorectal Cancer | D | 31 |
| p.Val600Glu | Selumetinib (AZD6244),BEZ235 (NVP-BEZ235, Dactolisib) | Melanoma | D | 42 |
| p.Val600Glu | Sorafenib | Colorectal Cancer | D | 24 |
| p.Val600Glu | Trametinib,PD0325901 | Melanoma | D | 22 |
| p.Val600Glu | Vemurafenib | Colorectal Cancer | D | 32 |
| p.Val600Glu | Vemurafenib | Melanoma | D | 22 |

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| Disclaimer |

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