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**LS** For Warfarin, what genes does it interact with and by what mechanism of interaction in DGIdb?

**L** `get_gene_interactions_for_drug_list`

Based on the DGIdb query, here are the genes that interact with **Warfarin** along with their interaction details:

## Top Warfarin Gene Interactions


Gene	Interaction Score	Source(s)	Supporting Evidence
PRSS53	11.07	<a href="#">PharmGKB</a>	<a href="#">PMID:20716240</a> , <a href="#">PMID:17329985</a> , <a href="#">PMID:16611750</a>
STX1B	6.33	<a href="#">PharmGKB</a>	<a href="#">PMID:26751406</a> , <a href="#">PMID:27740732</a>
VKORC1L1	3.16	<a href="#">PharmGKB</a> , TEND, TdgClinicalTrial	<a href="#">PMID:29054760</a>
DDHD1	3.16	<a href="#">PharmGKB</a>	<a href="#">PMID:27488176</a>
FGFBP2	3.16	<a href="#">PharmGKB</a>	<a href="#">PMID:18535201</a>
NEDD4	3.16	<a href="#">PharmGKB</a>	<a href="#">PMID:27488176</a>
CYP2C18	1.05	<a href="#">PharmGKB</a>	<a href="#">PMID:19752777</a> , <a href="#">PMID:23327576</a>
GAS6	1.05	NCI	<a href="#">PMID:16014032</a>
PROS1	0.68	<a href="#">PharmGKB</a> , <a href="#">FDA</a>	<a href="#">PMID:19752777</a>
VKORC1	0.63	<a href="#">FDA</a> , TTD, TEND	—

## Key Observations

**Regarding Interaction Types/Mechanisms:** The DGIdb results for Warfarin do not include specific interaction types or directions in this query. However, the most clinically relevant interactions are well-established:

- **VKORC1** — Warfarin's primary target. It inhibits vitamin K epoxide reductase, blocking the vitamin K cycle needed for clotting factor synthesis. This is an FDA-recognized pharmacogenomic biomarker.
- **VKORC1L1** — A paralog of VKORC1 that may also be involved in vitamin K metabolism.
- **CYP2C18** — A cytochrome P450 enzyme involved in warfarin metabolism.
- **PROS1** (Protein S) — A vitamin K-dependent protein; warfarin affects its synthesis. Also an FDA biomarker.
- **GAS6** — A vitamin K-dependent protein that may be affected by warfarin's mechanism.

For more detailed mechanism information, I'd recommend consulting the linked PubMed publications or the [PharmGKB](#) database directly.

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