

Table 1: Breast cancer proteins with 3D structures

Gene Symbol	Protein Name	Cancer Type	PDB Structure Available	PDB ID	Citations
BRCA1	Breast cancer type susceptibility protein 1	Breast cancer	Yes	1JNX	Dorling et al. 2021; Burley et al. 2022; Xiao et al. 2024
BRCA2	Breast cancer type susceptibility protein 2	Breast cancer	Yes	1MJE	Li et al. 2024; Dorling et al. 2021; Xiao et al. 2024
TP53	Tumor protein p53	Breast cancer	Yes	1TUP	Dorling et al. 2021; Burley et al. 2022
CHEK2	Checkpoint kinase 2	Breast cancer	Yes	1GXC	Dorling et al. 2021; Burley et al. 2022; Xiao et al. 2024
ATM	Ataxia telangiectasia mutated	Breast cancer	Yes	5NP0	Dorling et al. 2021; Xiao et al. 2024
PALB2	Partner and localizer of BRCA2	Breast cancer	Yes	3EU7	Dorling et al. 2021
BARD1	BRCA1-associated RING domain protein 1	Breast cancer	Yes	1JM7	Dorling et al. 2021
RAD51C	RAD51 paralog C	Breast cancer	Yes	4O71	Dorling et al. 2021
RAD51D	RAD51 paralog D	Breast cancer	Yes	4RAD	Dorling et al. 2021
ESR1	Estrogen receptor alpha	Breast cancer	Yes	1A52	Burley et al. 2022
ERBB2 (HER2)	Receptor tyrosine-protein kinase erbB-2	Breast cancer	Yes	3PP0	Burley et al. 2022
PIK3CA	PI3K catalytic subunit alpha	Breast cancer	Yes	4OVV	Burley et al. 2022; Green et al. 2016
PTEN	Phosphatase and tensin homolog	Breast cancer	Yes	1D5R	Burley et al. 2022
AKT1	RAC-alpha serine/threonine-protein kinase	Breast cancer	Yes	3OCB	Burley et al. 2022
CDH1	E-cadherin	Breast cancer	Yes	3Q2V	Burley et al. 2022; Cancemi et al. 2019
MMP9	Matrix metalloproteinase-9	Breast cancer	Yes	1L6J	Cancemi et al. 2019
CYP19A1	Aromatase	Breast cancer	Yes	3S7S	Burley et al. 2022
CCND1	Cyclin D1	Breast cancer	Yes	2W96	Ortiz et al. 2017
MYC	c-MYC transcription factor	Breast cancer	Yes	1NKP	Green et al. 2016

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DNAJA3	DnaJ homolog subfamily A member 3	Breast cancer	Yes	4JXH	Zhao et al. 2024

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