

Supplementary Table I. Some reported function/role of Kinesin superfamily in breast cancer

Standardized name	Representative family members	Reported function/features in breast cancer	References	
Kinesin 1	KIF5A	N-kinesin	In TNBC is associated with more aggressive disease characteristics, including a higher TNM stage and lymph node metastasis.	5
	KIF5B	N-kinesin	Invasiveness, tumour formation and metastatic colonization.	6
Kinesin 2	KIF3A	N-kinesin	The association between high KIF3A expression and the adverse outcomes (tumour recurrence and lymph node metastasis) suggests that it plays a major role in cancer progression.	7,8
	KIF3B	N-kinesin	BC progression and metastasis.	4,9
	KIF3C	N-kinesin	The association between KIF3C expression and the adverse outcomes, specifically tumour recurrence and lymph node metastasis.	4,9
	KIF17	N-kinesin	Overexpression inhibits the invasion and metastasis.	10
Kinesin 3	KIF1A	N-kinesin	Overexpression contributes to docetaxel resistant.	11, 12
	KIF1C	N-kinesin	KIF1C promotes BC cell growth, survival and mediates taxane resistance.	13
	KIF13B	N-kinesin	Participates in a range of vital cellular activities, encompassing cytoskeleton organization, intracellular transport, microtubule-based movement, protein localization, and energy utilization through nucleotide binding and hydrolysis.	14
	KIF14	N-kinesin	Potential novel proliferation marker. KIF14 knockdown enhanced chemosensitivity in TNBC cell lines.	15-17
Kinesin 4	KIF4A	N-kinesin	Tumour-suppressive role in breast cancer patients by inhibiting migration and invasion while promoting apoptosis. KIF4A High expression shows doxorubicin resistance.	18-20
	KIF21A	N-kinesin	KIF21 has a role in breast cancer migration and invasion.	21, 22
Kinesin 5	KIF11	N-kinesin	Initiation or progression of human breast cancer and also higher expression observed in breast cancer cell lines with metastatic behaviour.	23, 24
Kinesin 6	KIF20A	N-kinesin	Prognostic biomarkers in BC patients. Initiation or progression of TNBC in humans.	25
	KIF20B		Overexpressed in breast cancer, specifically, significantly high expression in TNBC in comparison to hormonal positive breast cancer.	4
	KIF23	N-kinesin	Prognostic biomarkers in BC patients.	19, 26
Kinesin 7	KIF10	N-kinesin	KIF10 shows significantly higher expression in certain breast cancer subtypes, specifically the luminal B and basal-like subtypes.	4
	KIF18A	N-kinesin	Overexpression of KIF18A has been linked to the presence of metastasis in lymph nodes and poorer prognosis in breast cancer.	21, 27, 28
	KIF18B	N-kinesin	KIF18B expression promotes the malignancy of breast cancer.	29, 30
Kinesin 10	KIF22	N-kinesin	Cell proliferation and cancer development.	4, 31
Kinesin 11	KIF 26A	N-kinesin	Promoted BC cell proliferation.	32
	KIF 26B	N-kinesin	KIF26B activates the FGF2/ERK signalling pathway, which promotes cell migration and proliferation in breast cancer.	33-35
Kinesin 12	KIF12		Overexpressed in post-chemotherapy taxane resistance (docetaxel).	36
	KIF15	N-kinesin	KIF15 contributes to cell proliferation and migration in breast cancer.	19
Kinesin 13	KIF2A	M-kinesin	Proliferation, migration and invasion function.	37, 38
	KIF2C	M-kinesin	KIF2C is overexpressed and higher expression is associated with worse prognosis in breast cancer.	39
	KIF24	N-kinesin	Proliferation in breast cancer cell lines.	4, 40
Kinesin 14A	KIFC1	C-kinesin	KIFC1 has the potential to increase genetic instability in breast cancer, thereby enhancing the degree of tumour malignancy.	22, 41
Kinesin 14B	KIFC2	C-kinesin	Prognostic biomarkers in breast cancer patients	42
	KIFC3	C-kinesin	KIFC3 upregulation is strongly associated with resistance to docetaxel in breast cancer cells.	43
	KIF25	C-kinesin	Reduced autophagic flux and induced cell death	44