



Breast Cancer Xpress Chip™

Breast cancer is one of the most common types of cancer among women in the United States. Reports indicate that nearly one in every three cancers diagnosed in US women is breast cancer. An understanding of the molecular basis of breast cancer can lead to better cancer control through novel and scientifically-based cancer risk assessments, diagnostics, prognostics, and therapeutics. Focused gene expression analysis is a powerful approach for the validation of molecular biomarkers of disease, particularly in human cancers. Axela's Breast Cancer Xpress Chip is aimed at the development of improved disease biomarkers with the goal of improved diagnostics and therapeutics.

The Breast Cancer Xpress Chip from Axela Inc. enables differential gene expression analysis of breast cancer-related genes. The Breast Cancer Xpress Chip is a representation of genes differentially expressed in breast cancer tumors or cells, and is a powerful tool to compare gene expression profiles in human breast carcinomas and normal breast tissue.

The Breast Cancer Xpress Chip genes were identified using the Cancer Genome Anatomy Project (CGAP) database, SAGE Genie, and the SAGE Differential Gene Expression Displayer (a SAGE Genie tool for distinguishing significant differences in gene expression between sample sets). These datasets were used to identify those genes that are differentially expressed in breast cancer when compared to normal tissue. The Breast Cancer Xpress Chip includes 123 genes that are commonly cited by investigators performing clinical investigations in breast cancer, such as BRCA1 and BRCA2. In addition, the gene list includes estrogen-receptor (ER), p53, cyclin D1, growth-promoting target CDC25A, oncoprotein MDM2 (a negative feedback regulator of p53), BCL2, and pS2-regulated that are involved in methylation.

The Breast Cancer Xpress Chip exploits the Flow-Thru Chip® technology to perform assays with speed, accuracy, and reliability. The Breast Cancer Xpress Chip contains 123 gene probes printed in triplicate. The probes are 3' biased and are approximately 50 bases in length. The Xpress Chip includes hybridization controls, negative controls spike controls, 3'/5' ratio controls and gridding fiducials. All controls are printed in triplicate.

Ziplex Features

Flow-Thru Chip Technology - Enables fast hybridization times of less than 1.5 hours

Integrated system - Produces results in ~ 3 hours (start of hybridization to report)

Complete automation - Requires total hands-on time of only 20 minutes

Built-in image capture and analysis software - Delivers easy-to-interpret reports

High throughput processing - Processes up to 8 samples per run and 3 runs per day

The Breast Cancer Xpress Chip is designed for use with the Zplex System, which includes the Zplex Automated Workstation and Assay Reagent Kit. Axela provides comprehensive customer support.

Breast Cancer Xpress Chip Gene List

ACP2	ACPP	ACTB	ACTG1	ACVRL1	ADCK1
ALDH1A3	ANKS6	APOD	AQP7	CALCOCO1	CALM2
CAPNS1	CASP3	CCL2	CCND1	CCT7	CD74
CPB1	CRYAB	CSN1S1	CSN2	CSN3	CXCL12
CYP24A1	CYP4F2	CYP4Z1	DCD	DLK1	DOPEY1
EEF1A1	EEF1A2	EEF2	EGR1	EHD2	EIF3S6
FABP3	FLJ35024	FMOD	FOSB	FSTL3	GNB2L1
GPD1	GPX3	HBA2	Hcg_1988300	HSP90AA1	HSPA8
ICAM1	IGHA1	IGHG1	IGKC	IL8	IMPDH2
ITGB4	ITM2A	KIAA1881	KLF8	KLK3	KRT14
KRT17	KRT18	KRT6A	KRT7	KRT8	LALBA
LAMC1	LAMC2	LDHA	LRP1	LTBP4	MARCO
MMP13	MMP7	MMP9	MYL9	MYO18A	PLTP
PNPLA2	POSTN	PPP1R16B	PPP1R2	PRLR	RAD23B
RBP4	RNASE1	ROGDI	RPL14	RPL26	RPL3
RPL36A	RPL5	RPL6	RPL7	RPL7A	RPL8
RPLP0-like	RPS17	RPS18	RPS2	RPS24	RPS3
RPS3A	RPS6	S100A7	SCD	SERPING1	SLC12A4
SLC35A2	SLC39A13	SLC6A14	SNX19	SOD2	STBD1
TAGLN	TF	TMEM17	TNFAIP2	TRAF1	TRIM2
VIPR1	VTN	ZNF131			

Ziplex Performance Specifications

Dynamic range – 10³ (3 logs)

Repeatability – Median CV on all probes <17%

Reproducibility – CV <20% (normalized)

Detection Sensitivity = 1:300,000 ratio of RNA spikes to mRNA

Differential Expression Sensitivity = 2-fold difference

Ordering Information:

Product Name: Breast Cancer Xpress Chip™

Description: Focused content TipChip with 123 Breast Cancer-related genes including controls.

Size: 48 TipChips / package.

Catalog Number: 26301-01

Related Products:

26300-01 Metabolic Xpress Chip™
 26302-01 Colon Cancer Xpress Chip™
 26303-01 Inflammation Xpress Chip™