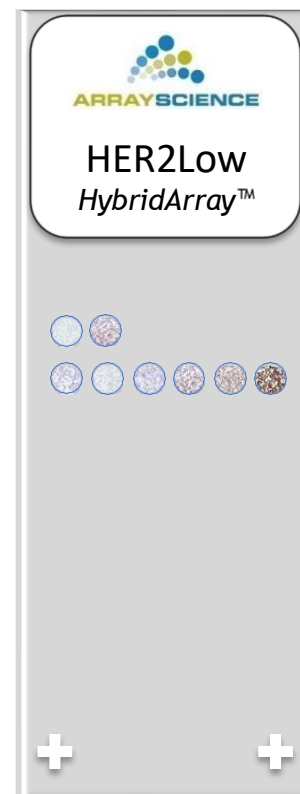


	Technical Data Sheet	
Breast HER2Low HybridArray™ Control	Catalog #	BC-8-1-3-1
	CMA/Lot #	1440
	Intended Use	Research Use Only

Description	HER2Low HybridArray™ Control			
Array Science Catalog Number	BC-8-1-3-1-B (Blocks) BC-8-1-3-1-S (Slides)			
Uses	This control spans 0-3+ expression levels with emphasis on the HER2Low range. The array slides may be helpful for initial assay optimization, validation, and daily QC for monitoring assay consistency.			
Composition		Cell type	HER2	FISH
	1	Lymphoma	0	2.4/2.0=1.2
	2	Tissue*	1-3+ (variable)	
	3	Colon CA	0-1+	2.1/1.6=1.3
	4	Breast CA	0-1+	2.6/2.4=1.1
	5	Breast CA	1+	3.9/3.5=1.1
	6	Breast CA	1-2+	3.9/3.1=1.3
	7	Breast CA	1-2+	2.5/1.9=1.3
	8	Breast CA	3+	20/3.5=5.7
Core Diameter	1mm			
Core Depth	3mm			
Estimated Yield	Up to 450 sections at 3-4um			
Baking	Slides should be thoroughly dried and baked at 60-65°C for 1-2 hours prior to staining.			
Cells Per Core	Approximately 2,000 cells are presented in each core on an H&E-stained histologic section.			
Storage Conditions	Ambient			
Stability	Use blocks within 24 months of the date of manufacture. Slides should be stained within 2 weeks of sectioning.			
Indication	Research Use			
Country of Origin	United States			



Note: Under certain assay conditions, some HER2 antibody clones may show significant cytoplasmic background staining¹⁻². This is particularly seen with 4B5 (as in core 4). Cytoplasmic background staining is also be seen in some clinical samples and can be especially prominent gastric carcinoma. Recent data suggests that this is due to cross-reactivity with the AKR1B protein family³.

1. Systems, V. M. *PATHWAY anti-HER-2/neu (4B5) Rabbit Monoclonal Primary Antibody Interpretation Guide for Breast Cancer*. (2022).
2. Warren, P. D. et al. Paratope plasticity determines anti-HER2 (4B5) antibody specificity. *MAbs* 17, (2025).
3. Weverwijk, A. Van et al. Metabolic adaptability in metastatic breast cancer by AKR1B10-dependent balancing of glycolysis and fatty acid oxidation. *Nat. Commun.* (2019). doi:10.1038/s41467-019-10592-4

*Deidentified breast carcinoma tissue specimens obtained from U.S. archival sources with IRB approval.