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DNA & BEYOND

BRCA 1/2 Panel

Unlocking the BRCA Enigma: The Key to Exact Genetic Insight

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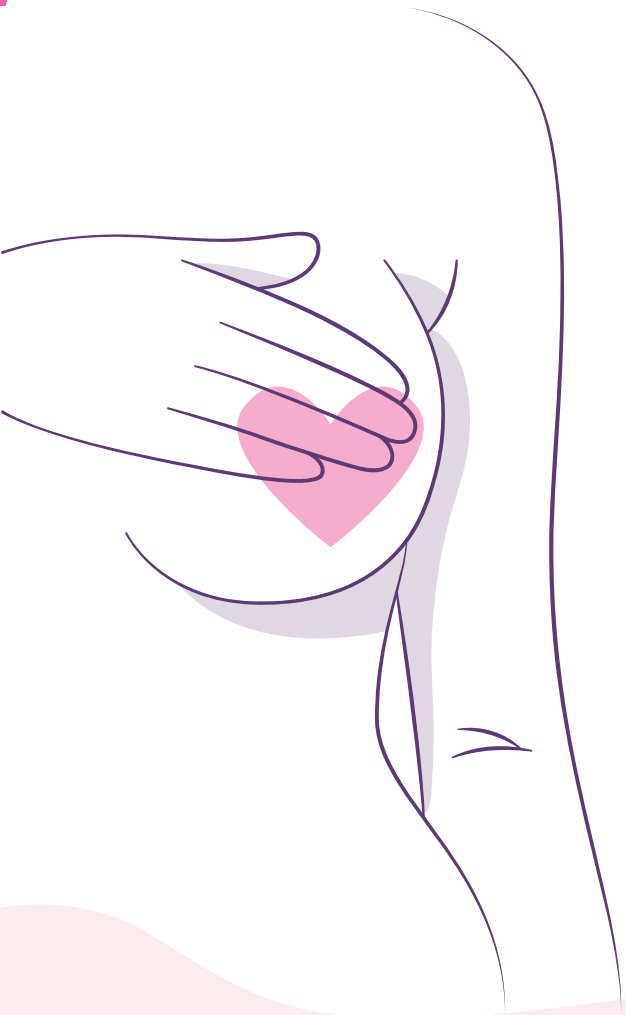


Understanding BRCA:
The Genetics Behind Breast Cancer

Identifying Mutations for Early Detection and Personalized Intervention

Breast cancer is the most common cancer worldwide, with 2.5 million new cases and over 700,000 deaths annually (WHO, 2024). Ovarian cancer contributes an additional 310,000 cases each year. In India, the burden is rapidly increasing, with an estimated 232,832 new breast cancer cases and 49,644 new ovarian cancer cases diagnosed annually (ICMR–NCRP, 2025).

Mutations in the BRCA1 and BRCA2 genes are a significant risk factor for these cancers. They substantially increase a woman's lifetime risk of developing breast and ovarian cancers. In India, 20-30% of hereditary breast and ovarian cancers are linked to these mutations, highlighting the critical need for genetic assessment, early detection, and personalized prevention strategies to help manage this rising health concern.

Comprehensive NGS Panel for BRCA 1/2 Screening

Traditional methods for BRCA1/2 screening, including Sanger sequencing, MLPA, and PCR-based assays, have notable limitations. They often require multiple assays to detect different mutation types, making them labor-intensive. These methods may also miss rare or complex variants, limiting their overall effectiveness in comprehensive BRCA screening.

The **BRCA 1/2 Panel by Uncoded** overcomes these challenges with a robust amplicon-based NGS assay that delivers comprehensive coverage and high sensitivity in a single workflow. It enables precise detection of both somatic and germline variants, providing results that are accurate, efficient, and reliable.

Key Features

Enrichment Method
Utilizes Multiplex PCR for accurate target amplification with high specificity and efficiency.

Target Genes
Complete exons of BRCA1 and BRCA2 genes (19,785 bp cumulative size), including 20 bp flanking intron regions.

Input DNA Requirement
10–40 ng/pool of genomic DNA.

Sample Types
Genomic DNA from blood, tissue, and FFPE DNA.

Variant Types
Accurately detects germline or somatic Single Nucleotide Variants (SNVs), insertions/deletions (INDELs), and Copy Number Variations (CNVs) at high sensitivity.

Benchwork Time
Streamlined workflow with ~3 hours total assay time, including ~75 minutes of hands-on work for library preparation.

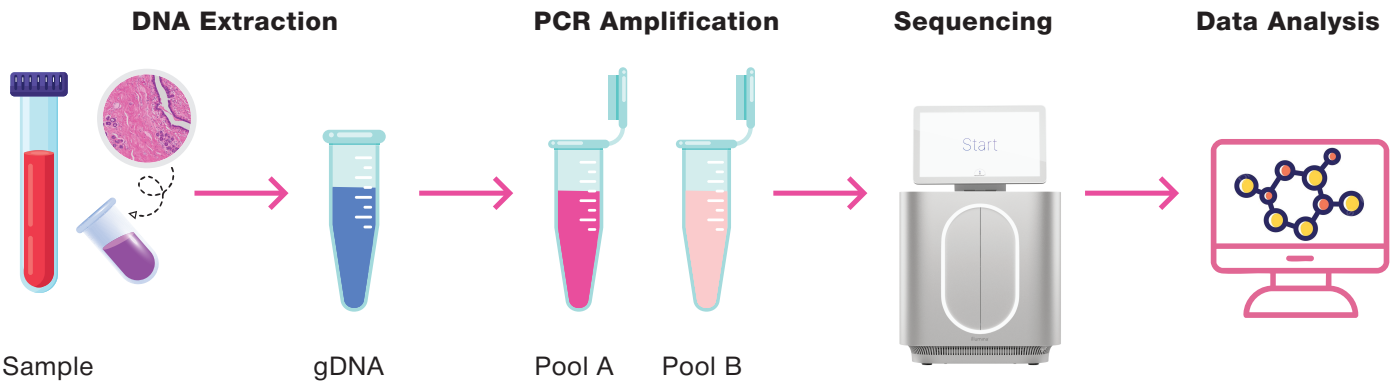
Amplicon Design
Incorporates 200+ amplicons across 2 primer pools

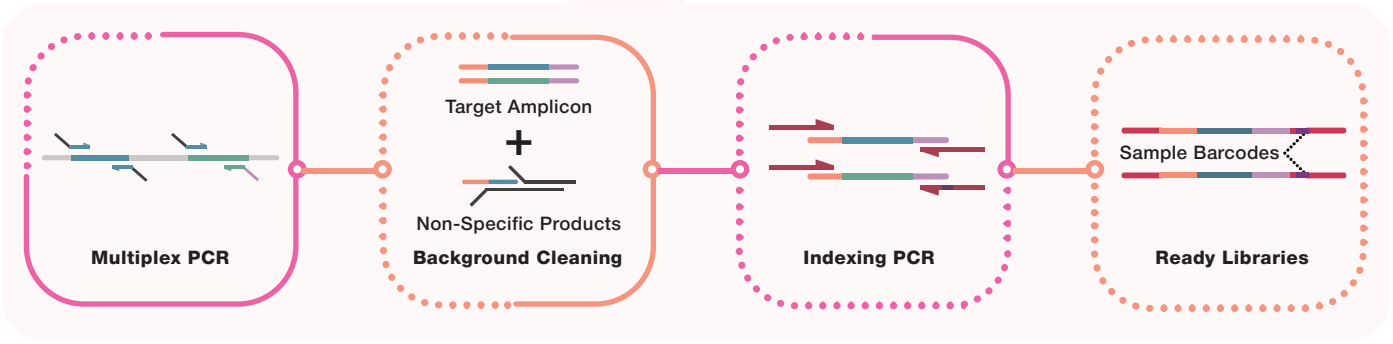
Coverage
Delivers 100% design coverage, ≥95% uniformity, and ≥95% on-target aligned reads for reliable variant detection.

Platform Compatibility
Fully compatible with all Illumina sequencing platforms.

Analysis Pipeline
SeqSight analysis platform included for streamlined analysis.

Workflow





Data Anaysis Platform

Powered by SeqSight™ – Precision Insights for Breast Cancer

SeqSight™ is a cloud-based NGS data analysis software by Uncoded designed to support comprehensive interpretation of breast cancer sequencing data. It enables automated variant calling, annotation, and classification, helping researchers streamline data workflows and uncover key genomic alterations. The platform supports multiple input formats and delivers high-throughput, reproducible analysis across BRCA 1/2 gene panels.

- AI-Powered Interpretation
- Real-Time Dashboards
- Seamless LIMS Integration
- Built-in compliance (HIPAA & GDPR) FDA & NCCN guideline integration

Kit Configuration

Cat No.	Product Name	Rxns
13911	BRCA 1/ 2 Panel	8
13913		24
13915		96

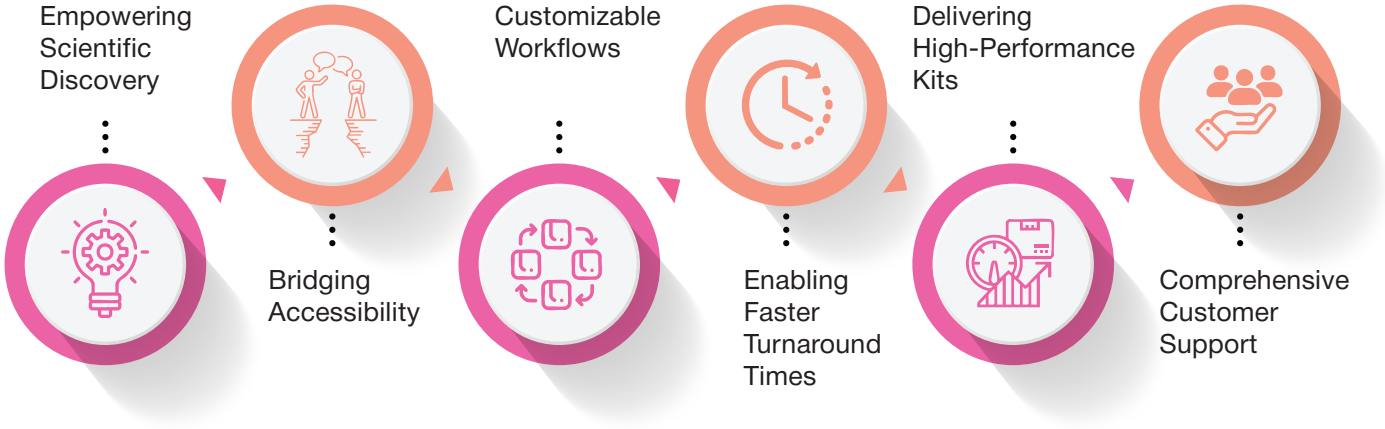
DECODING MULTI-OMICS WITH
UNCODED BY PREMAS LIFE SCIENCES

At the intersection of science and innovation stands **Uncoded** – an in-house brand by **Premas Life Sciences**, created to democratize access to high-quality multi-omics solutions, Made in India, for the world.

With over 18 years of legacy and 900+ years of cumulative team expertise, Premas Life Sciences has long been a trusted name in enabling genomics, proteomics, cell biology, biopharma, agriculture, and healthcare breakthroughs in India. Uncoded is the natural evolution of this mission—crafted to empower every lab, every clinician, every researcher with tools that are reliable, cost-effective, and future-ready.

Uncoded is not just a product line it's a movement. A Make in India initiative to advance life sciences through high-quality, globally aligned NGS tools and multi-omics platforms made by scientists, for scientists.

WHAT WE STAND FOR



Uncoded is more than a product line. It is a movement - **driven by purpose, powered by science**.

OUR PARENT LEGACY – PREMAS LIFE SCIENCES

Founded in **2005, Premas Life Sciences Pvt.** Ltd. has been at the forefront of bringing cutting-edge technologies to India, empowering scientists, clinicians, and researchers with world-class solutions. Founded by passionate scientists and industry experts, we embarked on a mission to bridge the gap between technology and innovation. Today, we proudly stand as a trusted partner in advancing scientific discovery and translational research in India.

At Premas Life Sciences, we partner with the world's most innovative technology providers to equip Indian researchers with the latest advancements in genomics, proteomics, and multi-omics. Our collaborations with **Illumina**, **Twist Bioscience**, **Olink**, **Covaris**, **Cytek**, **Horiba**, **Sphere Bio** and **Bruker Spatial Biology** ensure that cutting-edge tools are accessible to the Indian scientific community.

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