

ターゲットサイズに応じたNGSカスタムパネル製品のご紹介

XGEN CUSTOM HYB PANEL, XGEN MRD PANEL

INTEGRATED DNA TECHNOLOGIES



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30年以上にわたるライフサイエンス研究の世界的リーダー

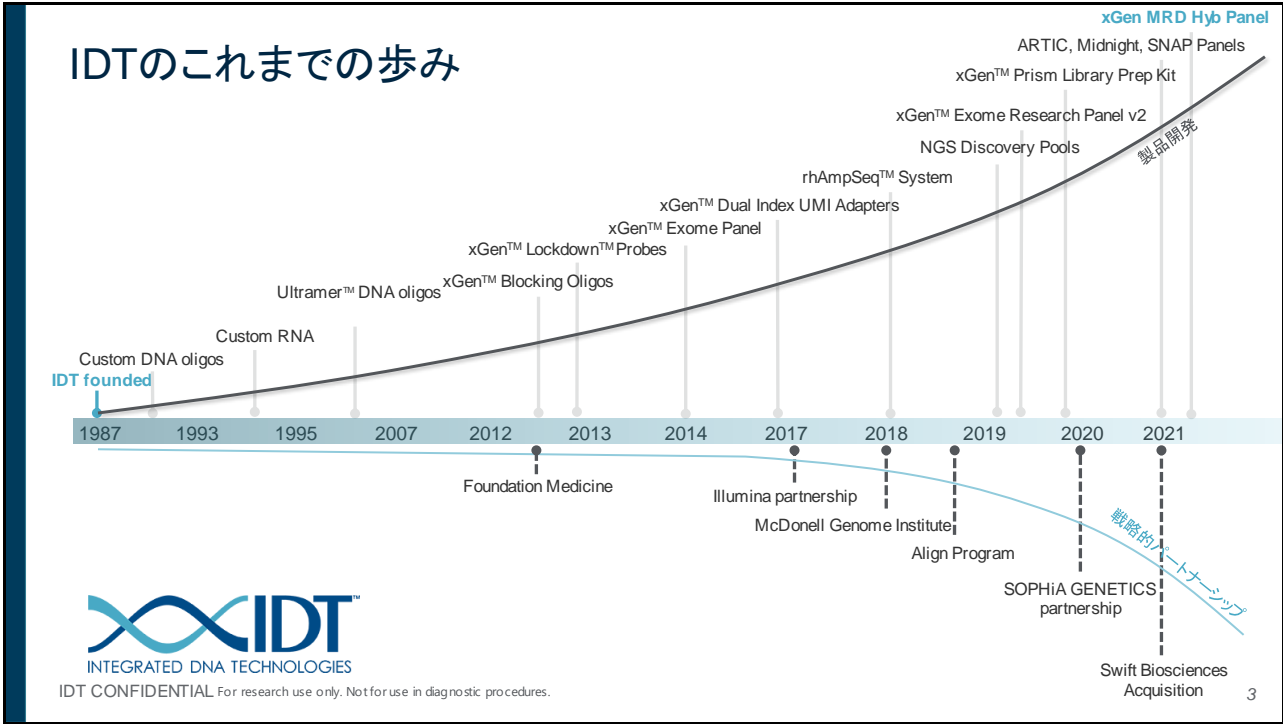


従業員 1,500 名以上 | 顧客 130,000 人以上 | 1 日の注文数約 4,200 件

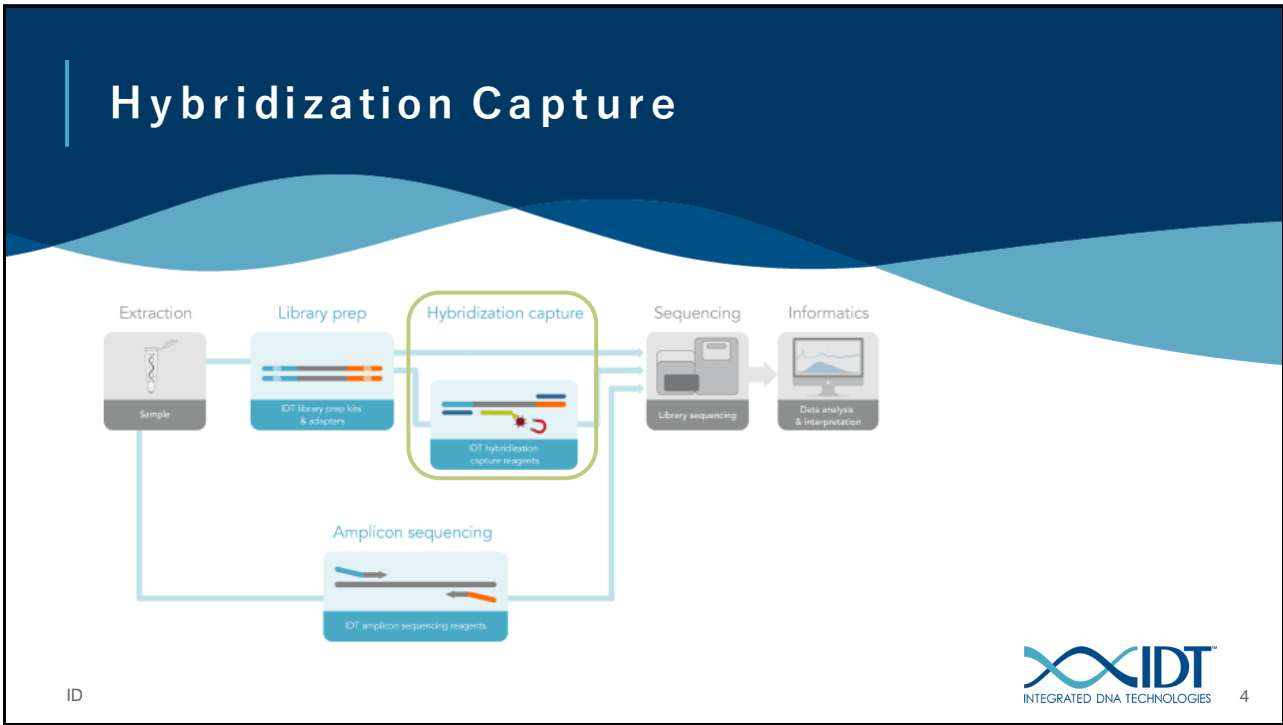
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研究用途専用。診断用途には使用しないでください。

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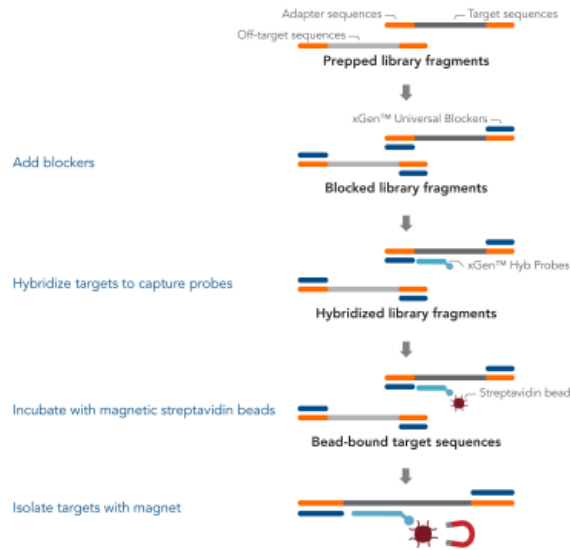


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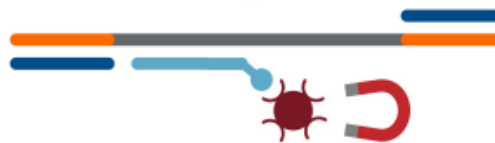
| ハイブリダイゼーションキャプチャーのワークフロー



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| ハイブリダイゼーションキャプチャー取り扱い製品

- xGen Predesigned Hyb Panels → 設計済みプローブパネル
- xGen Custom Hyb Panels, MRD Panels → カスタム設計プローブパネル
- xGen Hybridization Capture Core Reagents → 周辺試薬

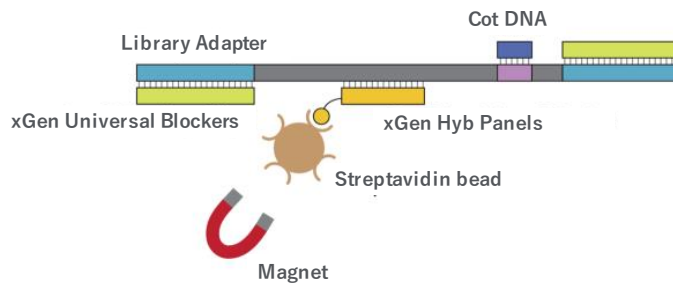


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xGen Hybridization Capture Core Reagents

ハイブリダイゼーションキャプチャー周辺試薬

- xGen Hybridization and Wash V2 Kit → 各種buffer、Cot DNA、Streptavidin beadのセット
- xGen Universal Blockers → アダプター配列をマスクするオリゴ
- xGen Library Amplification Primer Mix → 濃縮後のライブラリをPCR増幅するプライマー



xGen Predesigned Hyb Panels

設計済みプローブパネル

- xGen Exome Hyb Panel → ヒト全エクソーム解析用パネル
- xGen AML Cancer Hyb Panel → AML（急性骨髄性白血病）解析用パネル
- xGen Inherited Disease Hyb Panel → 遺伝性疾患解析用パネル
- xGen Pan-Cancer Hyb Panel → がん解析用パネル
- xGen CNV Backbone Hyb Panel → ヒトゲノム全体のCNV解析用パネル
- xGen Human ID Hyb Panel → ヒトDNAサンプルの識別用パネル
- xGen Human mtDNA Hyb Panel → ヒトミトコンドリアDNA解析用パネル
- xGen SARS-CoV-2 Hyb Panel → SARS-CoV-2解析用パネル

xGEN MRD PANEL

50-2000 probesでのデザインが可能なカスタムパネル(6kb-240kb)



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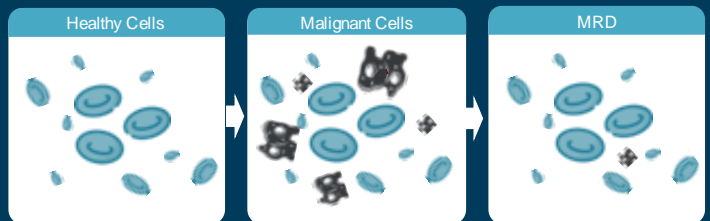
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微小残存病変 (MRD) とは？

治療後に少数のがん細胞が残る場合、これを微小残存病変 (MRD) と呼びます。

循環セルフリーDNA (cfDNA) でMRDを明らかにすることで、高い精度で再発を予測できます。

MRDを示すctDNAのごく一部を特定することには課題があります。



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MRD 研究で用いられる最も一般的なテクノロジー



Polymerase Chain Reaction (PCR)



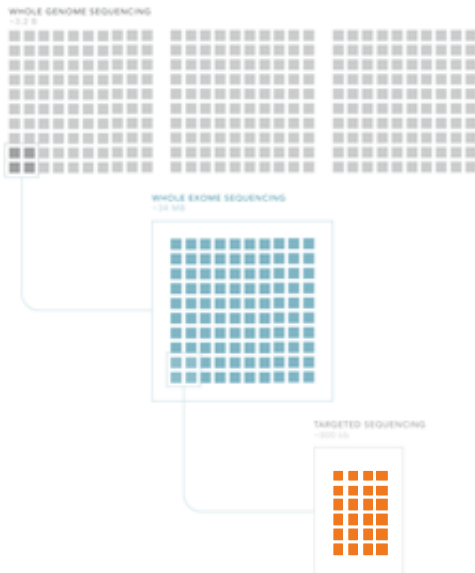
Flow Cytometry



Next Generation Sequencing (NGS)

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発見

with our xGen WGS Solution

調査

with our xGen WES or other Targeted Solutions

追跡

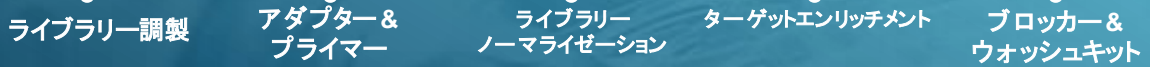
with our xGen MRD Solution

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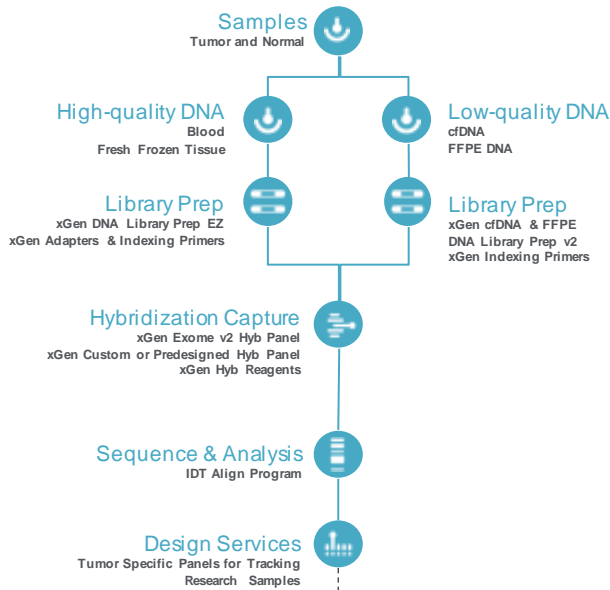
xGen - NGS made for MRD research



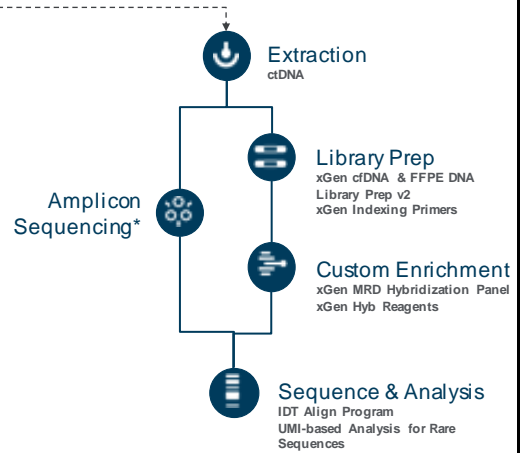
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腫瘍情報を考慮した研究ワークフロー

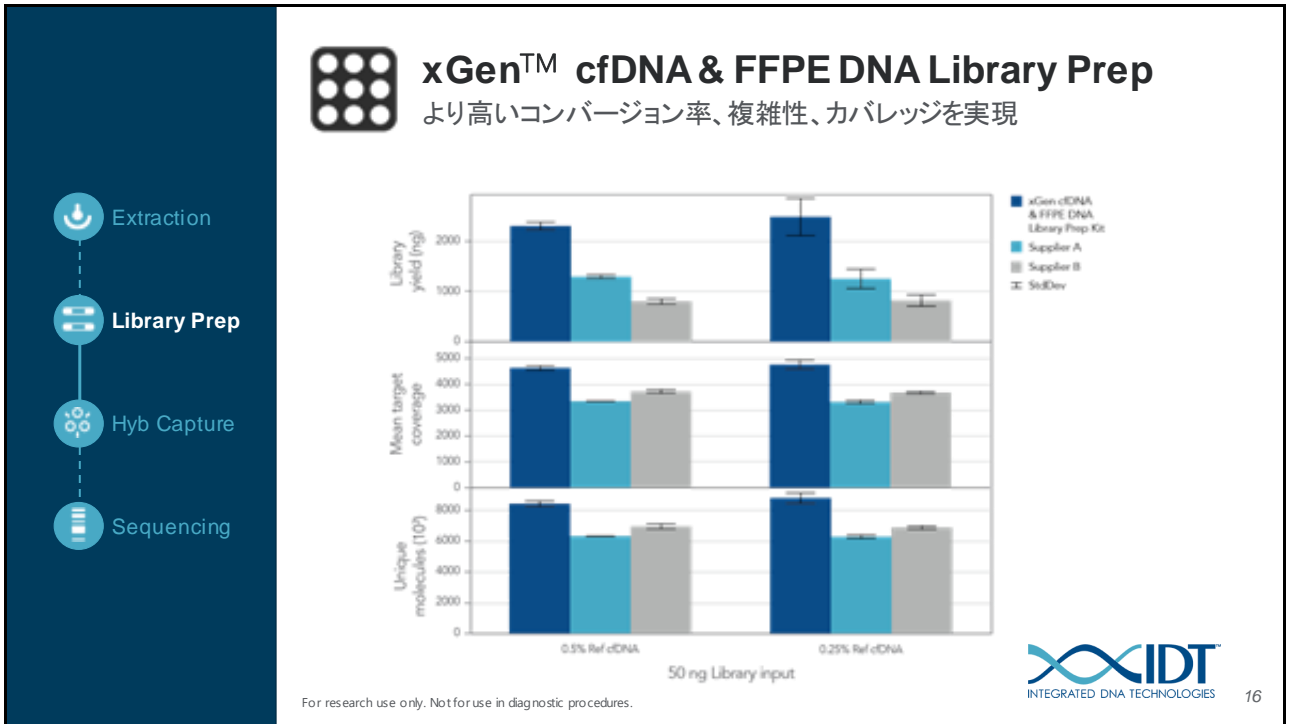


カスタムMRD研究のワークフロー

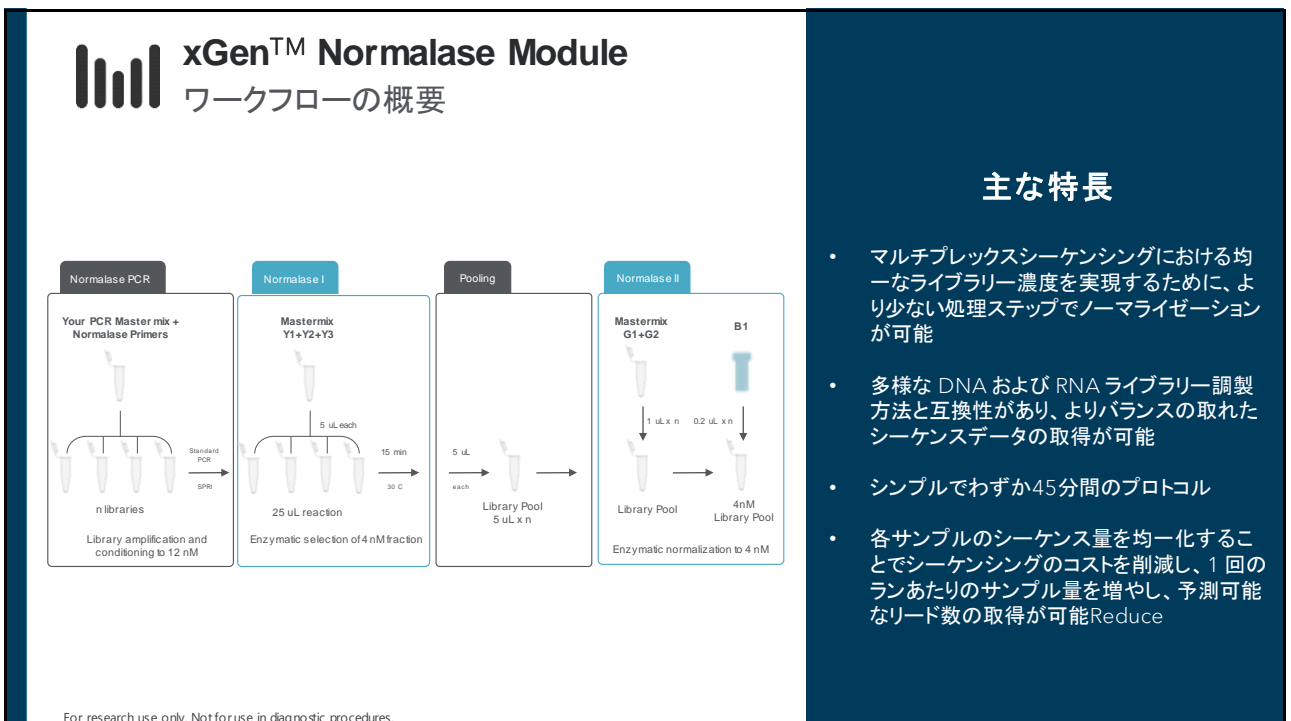


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*consult your IDT sales representative to learn more about IDT's amplicon sequencing solutions 14



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Extraction

Library Prep

Hyb Capture

Sequencing

xGen™ Normalase Module

ライブラリーノーマライゼーション技術の進歩

A. qPCR v s Normalase

Reads identified (%)

CV: 22.5% CV: 9.4%

qPCR Normalase

B. Pre- v. s. Post-Normalase

Reads identified (%)

CV: 15.5% CV: 7.7%

Pre-Normalase Post-Normalase

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カスタム研究ソリューションにおける新しいスタンダード

制限なく、スケーリング、簡素化、および時間の節約が可能

1パネルあたり最大 2,000 個の
プローブのオーダーが可能

1注文ごとに最大 50 個の独自の
パネル作成が可能

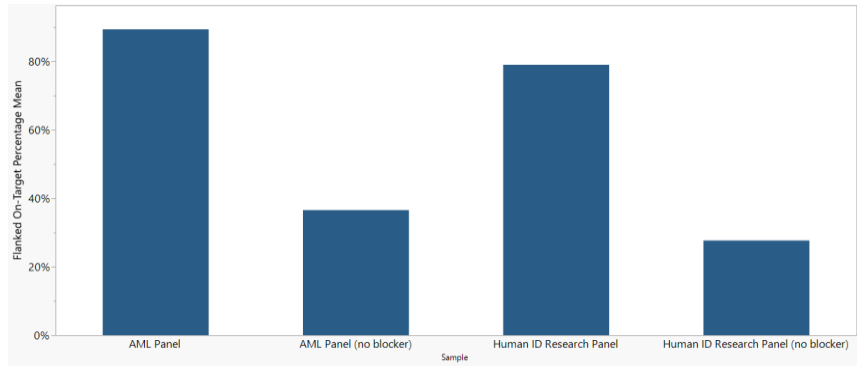
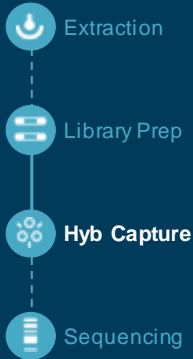
デザイン決定から最短5営業日でお届け

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xGen™ Blocking Oligos & Wash V2 Kits

ブロッカーの使用によりオンターゲット率を向上



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カスタムハイブリダイゼーション-新規サービス

xGen MRD Hybridization Panel

Product Component Id	Product Name	Component Name	List Price (JPY)
351507	xGen™ MRD Hyb Panel, 16 rxn	50 - 250 probe pricing service	61,300
351508	xGen™ MRD Hyb Panel, 16 rxn	251 - 500 probe pricing service	98,000
351509	xGen™ MRD Hyb Panel, 16 rxn	501-1000 probe pricing service	147,000
351510	xGen™ MRD Hyb Panel, 16 rxn	1001 - 2000 probe pricing service	244,900

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xGen Custom Hyb Panels

500-50000 probesでのデザインが可能なカスタムパネル(60kb-6Mb)



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web

xGen Custom Hyb Panels

カスタム設計プローブパネル

- 合成後のサービスに応じて、4つの製品中から選択可能

Feature	xGen Custom Hyb Panel—Accel	xGen Custom Hyb Panel	xGen Custom Hyb Panel—Production (No functional testing)	xGen Custom Hyb Panel—Production
Custom design service	✓	✓	✓	✓
Quality synthesis	✓	✓	✓	✓
NGS Functional Test Report		✓		✓
Quality documentation			✓	✓
Stock custom panel	✓	✓	✓	✓
Reaction sizes	16, 96, custom	16, 96, custom	16, 96, custom	16, 96, custom
Turnaround time	~2週間	通常~4週間	Project dependent	Project dependent

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| Custom Hyb Panel定価価格表 – 16 rxn

Max # of Probes	16 rxn			
	xGen Custom Hyb Panel - Accel	xGen Custom Hyb Panel	xGen Custom Hyb Panel - Production No Functional Test	xGen Custom Hyb Panel - Production
500	¥290,000	¥395,000	¥527,200	¥595,000
1,000	¥350,000	¥440,000	¥580,000	¥810,000
5,000	¥585,000	¥990,000	¥1,398,100	¥1,445,000
7,500	¥655,000	¥1,110,000	¥1,530,000	¥1,810,000
10,000	¥700,000	¥1,145,000	¥1,810,000	¥2,210,000
25,000	¥1,750,000	¥1,985,000	¥4,520,000	¥4,880,000
50,000	¥3,500,000	¥3,735,000	¥9,045,000	¥9,175,000

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| Custom Hyb Panel定価価格表 – 96 rxn

Max # of Probes	96 rxn			
	xGen Custom Hyb Panel - Accel	xGen Custom Hyb Panel	xGen Custom Hyb Panel - Production No Functional Test	xGen Custom Hyb Panel - Production
500	¥875,000	¥1,005,000	¥1,355,100	¥1,620,000
1,000	¥1,165,000	¥1,285,000	¥1,985,000	¥2,135,000
5,000	¥1,750,000	¥2,160,000	¥2,805,000	¥3,200,000
7,500	¥2,190,000	¥2,550,000	¥3,280,000	¥3,920,000
10,000	¥2,390,000	¥2,735,000	¥3,350,000	¥4,070,000
25,000	¥2,915,000	¥3,210,000	¥4,665,000	¥5,155,000
50,000	¥3,790,000	¥3,995,000	¥9,335,000	¥9,825,000

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Custom Hyb Panelの注文の流れ



xGen™ Hyb Panel Design Toolサービスを利用して
プローブデザインが必要になります。
※ 弊社の方でサポートさせていただきます。

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XGEN™ HYB PANEL DESIGN TOOL

URL

<https://sg.idtdna.com/site/order/designtool/index/XGENDESIGN>



GET HELP | EN | SIGN IN

0 ITEMS \$0.00 USD

[Order by stock part number](#)

PRODUCTS & SERVICES ▾ APPLICATIONS & SOLUTIONS ▾ SUPPORT & EDUCATION ▾ TOOLS ▾ COMPANY ▾



xGen™ Hyb Panel Design Tool

An updated solution offering enhanced design functionality to generate your custom hybridization capture panels for targeted sequencing on Illumina platforms.

- Easy design for even coverage across targets
- Capable of generating targeted sequencing panel designs for multiple genomes with custom tiling options
- Fast, expert consultation available from our technical support team to address custom specifications outside the scope of the publicly available tool

Sign In

Keep me signed in. [Details](#) [Forgot Password](#)

SIGN IN

REGISTER



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カスタムパネルの設計に便利なツール

xGen Hyb Panel Design Tool

Welcome to the IDT xGen Hyb Panel design tool. If you would like a consultation to address a design outside the scope of this tool, submit a request to the xGen custom design service here.

Create new design Dashboard

Input format: BED target coordinates

Species: Homo sapiens (Human) NCBI GRCh37.p13 (hg19) - 105.20201022

Run probe QC: Yes No

Panel name: Name your design...

Probe length: 120

Probe tiling density: 1x

Paste/Type input: Upload file

Submit your BED coordinates here. Both .txt and .bed file extensions are acceptable.
Example: BED File

Choose File NO FILE CHOSEN

DESIGN
CLEAR AND RESET
Need design assistance?

Email address: user@dna.com

BED、FASTA、遺伝子記号、またはトランスクリプトの登録番号入力を選択

目的のゲノムを選択

さまざまなタイリングオプションをカスタマイズ

さらなるカスタマイズが必要なパネル設計の場合、NGS設計チームによる迅速で専門的なコンサルティングをご利用可能です。

研究用途専用。診断用途には使用しないでください。



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再利用や再注文を簡単にするため、設計に名前を付けて保存

Design Tool Dashboard

My xGen Designs

Panel name	Source	Date & Time	Probe count	Info	ACTIONS
Elephant Gene target 1	IDT Design	6/25/2021, 3:27:23 PM	2805	In process	ACTIONS
Human Gene Target 1	Design Tool	6/25/2021, 2:46:45 PM	2942	In process	ACTIONS

Show/Hide Inactive Designs

Need design assistance? Contact ngsdesign@idtdna.com or have our Design Team assist with a Custom Design.

Design date / time	Species	Target base count	Probe Count	Percent covered	Output Files
6/25/2021, 2:46:45 PM	Homo sapiens (Human) NCBI GRCh38.p13 (hg38)	45668	2942	99.2	Download

Quote suggestions

xGen Custom Hyb Panel

xGen Custom Hyb Panel - Accel

xGen Custom Hyb Panel - Production

xGen Custom Hyb Panel - Production (No functional testing)

Need more options? Select "Custom"

16 rxn

96 rxn

Custom rxn

Comments & Customizations

Specify desired panel customizations here for our Design Team.

Email for quote request:

REQUEST QUOTES

研究用途専用。診断用途には使用しないでください。



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IDT独自のオフターゲットQCメソッドにより、設計したプローブのオフターゲットキャプチャーのリスクを検査



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Custom Hyb Panelの注文の流れ



xGen™ Hyb Panel Design Tool上で、見積もり・発注依頼ができますが、IDTジャパン経由で見積もり・代行発注もできます。

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MRD Panelの注文の流れ



1. プローブデザイン(既にプローブ配列をお持ちの場合)

所定のテンプレートにお客様ご自身でプローブ配列およびパネル名をご記入いただくのみ

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MRD Panelの注文の流れ



2. プローブデザイン(プローブ配列をお持ちで無い場合)

xGen™ Hyb Panel Design Toolサービス (Human)を利用して
プローブデザインが必要

※ 弊社の方でサポートさせていただきます。

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MRD Panelの注文の流れ



1. テンプレート作成

テンプレート (xgen-mrd-hybridization-panel-ordering template) の入手

<https://sg.idtdna.com/site/order/poolentry/index/xgen-mrd-hyb-panel-ordering-tool>
の下記からダウンロード

xGen™ MRD Hybridization Panel Ordering Tool

Configure

Selected product: xGen™ MRD-Hyb Panel, 24 rxn

Minimum probes per panel: 50

Maximum probes per panel: 2,000

Probe length restriction: 60 - 120

Maximum panels: 50

Supported file format: Excel spreadsheet (.xls, .xlsx) **Download Template**

File uploaded: No files chosen.

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MRD Panelの注文の流れ



2. テンプレート作成

パネル名を記入

Probe sequenceを入力

	A	B
	Panel Name	Probe Sequence
1		
2	lipid_panel_x1	GCCTGGAGGGCCGGGGGGAAGTTTTCTTGCAGGAGTTTTGGCTGGCCAGCGGGCCGGGG
3	lipid_panel_x1	AHETTTGGCCACAGCAAGCTGGGGGGGGGTTTCCCGGACCCGACAGTTGATGTTGTCGGCCCTCA
4	lipid_panel_x1	TGGGCCCTGAGCCGAGGGTCTGAGGGGCTACCTGTGTGTAACCCAGAGCTGCTGTGAGACTG
5	lipid_panel_x1	GAATACGCTTATGTAGCAGCCCAAGGGTGTAGGAGCTGTGCGGCGCGCATCAGAGGATGTC
6	lipid_panel_x1	AAGTCATAGGGTGTGTTTCAGTTAGGGCTGGCAGACTCTCTGATGCTGTGTTCTCCAGAG
7	lipid_panel_x1	ATTACTCTACAGAAACCTCCAGCAACCACTATTGAGACTCTGCTCATACAGTAGGATCA
8	lipid_panel_x1	CTTCCCAAGTGTCTAGGCCCTTGGCAGGCTGTGATGCTCTCTCTTGGCTTCCATGATG
9	lipid_panel_x1	AGCAGCACACAGCAGCTGTGAGTGTCAAGCTCTCTCTCTGACACAGGGGAGAGATGTGATGG
10	lipid_panel_x1	GCAGAAATCCAGGAGGAGAGCCAGGGGGGCTGGCTCTGGAGGCCACAGCCCTCAGTTGACAG
11	lipid_panel_x1	AGAGGCTGTTACCTCACCGTAGCCAGGCCCTCAAGTGGCTTGGATTTTGGAGGTTGCTC
12	lipid_panel_x1	ATTAGCCCTCCCGGTTGATCTGGGGAGAGATGCTGGBGTTCTGAGGCTCAAGATGTTGTG
13	lipid_panel_x1	CTGTGGGGGCTCCAGAGATGTCAGCCCTCTCTTGAAGAGTGTGTTCTCTACAGGGGAGAGGG
14	lipid_panel_x1	CCAGGAGGAGAGGGTGAATCTCCACTGCAACACTGACCGGATCCCTACAGTGTGTCCAC
15	lipid_panel_x1	GCAGACCAACAGTGGAGGAGTTCCGGGGCCAGAGCTTATGTTGGAGATTTGTGTG
16	lipid_panel_x1	CCCCAAACATAGTCTTATCTCTGCTTGTGTTTCCCAAGGAGGTGATGAGGCTGGATGAA
17	lipid_panel_x1	AGCCAGGCTTACCCAGGGCTGTGGCTCACAGGCTGCTCTCAAGGTTGCCAGTCTCTGGAG
18	lipid_panel_x1	TTGCTCTGCTTCTGATGGAGACAGCTGAGAGAGGGGACAGGAGAGGATGACTCTCTC
19	lipid_panel_x1	CAAGGCGCCGGGGGTGAGCCGACAGGGCCTTAGGTCTCTCTCCAGGAGCAGCAACTCTC
20	lipid_panel_x1	GTCT
21	lipid_panel_x1	CCGACAGCGGACACAGCCACCTTCCACCGCTCCGCAAGGCTGGGGTGTAGGGATGGGA
22	lipid_panel_x1	TTTAAATAGGGGTGAGATAAATACACTAGGATTTCTGGGTTTCTTCATGTCATCATGTT
23	lipid_panel_x1	GGAG

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MRD Panelの注文の流れ



2. テンプレート作成

②顧客自身が行う(FASサポート)

i) DesignProbes-XGEN. ~ .xlsxのSeqの配列部分をコピー

	A	B	C	D	E	F	G	H	I	J
1	Chromosome	Start	Name	Score	Strand	Code	Seq	GC		
2	12	6537954	6537734 Target-31	50 +	down	BBN	TGTCATCG	120	63.33	
3	12	6537934	6537954 Target-31	50 +	down	BBN	GAAGGTG	120	63.33	
4	12	6584594	6584581 Target-63	50 +	down	BBN	TAGATG	120	39.17	
5	12	6536484	6536601 Target-26	49 +	down	BBN	GTCTCTA	120	47.5	
6	12	6538181	6538281 Target-32	49 +	down	BBN	AAGAGAT	120	40	
7	12	6537714	6537834 Target-31	46 +	down	BBN	GTCATG	120	55	
8	12	1782592	1782601 Target-78	45 -	down	BBN	GATCCTG	120	38.33	
9	12	6884044	6884054 Target-53	43 +	down	BBN	ATTACAG	120	33.33	
10	12	6527289	6527409 Target-30	41 +	down	BBN	SECCCTC	120	53.33	
11	12	1.12E+08	1.12E+08 Target-66	41 +	down	BBN	GTTATT	120	36.67	
12	12	1.12E+08	1.12E+08 Target-66	40 +	down	BBN	TAAATG	120	39.17	
13	12	1.12E+08	1.12E+08 Target-66	39 +	down	BBN	GTACAG	120	44.17	
14	12	1.12E+08	1.12E+08 Target-66	39 +	down	BBN	CTTCTGT	120	37.5	
15	12	1.12E+08	1.12E+08 Target-66	39 +	down	BBN	GGAAGT	120	39.17	
16	12	1.12E+08	1.12E+08 Target-66	36 +	down	BBN	TCTTAC	120	38.33	
17	12	1.12E+08	1.12E+08 Target-66	35 +	down	BBN	ACTGTAT	120	49.17	
18	12	1.12E+08	1.12E+08 Target-66	32 +	down	BBN	TTCAGC	120	43.33	
19	12	787187	787181 Target-49	30 -	down	BBN	AAATTT	120	34.17	
20	12	6538041	6538181 Target-32	29 +	down	BBN	TGCGCC	120	55	
21	12	1.12E+08	1.12E+08 Target-66	27 +	down	BBN	GGGCAAC	120	40	
22	12	1.12E+08	1.12E+08 Target-66	26 +	down	BBN	CCAGG	120	43.33	
23	12	1.12E+08	1.12E+08 Target-66	25 +	down	BBN	ATTACAG	120	32.5	
24	12	6536484	6536601 Target-26	15 +	down	BBN	TGCGCC	120	43.33	

ii) パネル名を記入してファイル保存

	A	B
1	Panel name	Probe Sequence
2	lipid_panel_x1	TGCTCCAGGCGGGGCGGAAATTTTCTGAGGGATTTTGTACTGCGCGGGCGGCGGGGCGG
3	lipid_panel_x1	TGCTCCAGGCGGGGCGGAAATTTTCTGAGGGATTTTGTACTGCGCGGGCGGCGGGGCGG
4	lipid_panel_x1	TGCTCCAGGCGGGGCGGAAATTTTCTGAGGGATTTTGTACTGCGCGGGCGGCGGGGCGG
5	lipid_panel_x1	TGCTCCAGGCGGGGCGGAAATTTTCTGAGGGATTTTGTACTGCGCGGGCGGCGGGGCGG
6	lipid_panel_x1	TGCTCCAGGCGGGGCGGAAATTTTCTGAGGGATTTTGTACTGCGCGGGCGGCGGGGCGG
7	lipid_panel_x1	TGCTCCAGGCGGGGCGGAAATTTTCTGAGGGATTTTGTACTGCGCGGGCGGCGGGGCGG
8	lipid_panel_x1	TGCTCCAGGCGGGGCGGAAATTTTCTGAGGGATTTTGTACTGCGCGGGCGGCGGGGCGG
9	lipid_panel_x1	TGCTCCAGGCGGGGCGGAAATTTTCTGAGGGATTTTGTACTGCGCGGGCGGCGGGGCGG
10	lipid_panel_x1	TGCTCCAGGCGGGGCGGAAATTTTCTGAGGGATTTTGTACTGCGCGGGCGGCGGGGCGG
11	lipid_panel_x1	TGCTCCAGGCGGGGCGGAAATTTTCTGAGGGATTTTGTACTGCGCGGGCGGCGGGGCGG
12	lipid_panel_x1	TGCTCCAGGCGGGGCGGAAATTTTCTGAGGGATTTTGTACTGCGCGGGCGGCGGGGCGG
13	lipid_panel_x1	TGCTCCAGGCGGGGCGGAAATTTTCTGAGGGATTTTGTACTGCGCGGGCGGCGGGGCGG
14	lipid_panel_x1	TGCTCCAGGCGGGGCGGAAATTTTCTGAGGGATTTTGTACTGCGCGGGCGGCGGGGCGG
15	lipid_panel_x1	TGCTCCAGGCGGGGCGGAAATTTTCTGAGGGATTTTGTACTGCGCGGGCGGCGGGGCGG
16	lipid_panel_x1	TGCTCCAGGCGGGGCGGAAATTTTCTGAGGGATTTTGTACTGCGCGGGCGGCGGGGCGG
17	lipid_panel_x1	TGCTCCAGGCGGGGCGGAAATTTTCTGAGGGATTTTGTACTGCGCGGGCGGCGGGGCGG
18	lipid_panel_x1	TGCTCCAGGCGGGGCGGAAATTTTCTGAGGGATTTTGTACTGCGCGGGCGGCGGGGCGG
19	lipid_panel_x1	TGCTCCAGGCGGGGCGGAAATTTTCTGAGGGATTTTGTACTGCGCGGGCGGCGGGGCGG
20	lipid_panel_x1	TGCTCCAGGCGGGGCGGAAATTTTCTGAGGGATTTTGTACTGCGCGGGCGGCGGGGCGG
21	lipid_panel_x1	TGCTCCAGGCGGGGCGGAAATTTTCTGAGGGATTTTGTACTGCGCGGGCGGCGGGGCGG
22	lipid_panel_x1	TGCTCCAGGCGGGGCGGAAATTTTCTGAGGGATTTTGTACTGCGCGGGCGGCGGGGCGG
23	lipid_panel_x1	TGCTCCAGGCGGGGCGGAAATTTTCTGAGGGATTTTGTACTGCGCGGGCGGCGGGGCGG
24	lipid_panel_x1	TGCTCCAGGCGGGGCGGAAATTTTCTGAGGGATTTTGTACTGCGCGGGCGGCGGGGCGG

ii) xgen-mrd-hybridization ~ .xlsxのProbe sequenceにペースト

MRD Panelの注文の流れ



3. 注文

必要な情報を記入したテンプレートをメールでお送りください。IDTジャパンで代行発注を行います。

ライブラリー調製試薬 取り扱い製品

DNAサンプル用

- xGen DNA EZ Library Prep Kit (酵素法による断片化)
- xGen DNA MC Library Prep Kit (超音波破砕機で断片化)
- xGen cfDNA & FFPE DNA Kit
- xGen ssDNA & Low-Input DNA Library Preparation Kit

RNAサンプル用

- xGen Broad-range RNA Library Prep Kit
- xGen RNA Library Prep Kit

メチル化シーケンス用

- xGen Methyl-Seq DNA Library Prep Kit



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THANK YOU



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