qBiomarker Somatic Mutation PCR Array

Human CTNNB1 Gene

Cat. no. 337021 SMH-803AA

For real-time PCR-based, pathway-focused, somatic mutation profiling

Format	For use with the following real-time cyclers
Format A, with fluorescein	Bio-Rad® models iCycler®, iQ™5, MyiQ™, MyiQ2
Format A, with ROX™	Applied Biosystems® models 5700, 7000, 7300, 7500, 7700, 7900HT, ViiA™ 7 (96-well blocks); Bio-Rad/MJ Research Chromo4™; Eppendorf® Mastercycler® ep realplex models 2, 2s, 4, 4s; Stratagene® models Mx3005P®, Mx3000P®
Format C, with ROX	Applied Biosystems models 7500 (Fast, 96-well block), 7900HT (Fast, 96-well block), StepOnePlus™, ViiA 7 (Fast, 96-well block)
Format D, with ROX	Bio-Rad CFX96™; Bio-Rad/MJ Research models DNA Engine Opticon®, DNA Engine Opticon 2; Stratagene Mx4000®
Format E, with ROX	Applied Biosystems models 7900HT (384-well block), ViiA 7 (384-well block); Bio-Rad CFX384™
Format F, with ROX	Roche® LightCycler® 480 (96-well block)
Format G, with ROX	Roche LightCycler 480 (384-well block)

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Sample & Assay Technologies

Description

The Human CTNNB1 Gene qBiomarker Somatic Mutation PCR Array allows the detection of 44 unique mutations in the human CTNNB1 gene. CTNNB1, which can function as an oncogene, facilitates cell-cell communication from cadherins to the actin cytoskeleton as a part of adherens junctions. CTNNB1 also mediates WNT signaling as a co-activator of the TCF and LEF transcription factors. Previous scientific reports have shown a strong association between mutations in the CTNNB1 gene and colorectal cancer, medulloblastomas, and ovarian cancer. The CTNNB1 mutations found in cancer samples are predominately missense point mutations that cause abnormal WNT signaling. More than half of the observed mutations occur at serine or threonine residues phosphorylated by GSK3-beta. The DNA sequence mutation assays in the array detect the most frequent mutations in CTNNB1 compiled from over 3,400 reported cancer sample sequences. Each mutation assay is bench-tested for the sensitive detection of a low percentage of mutation-containing DNA in a background of wild-type genomic DNA. The 96-well format of this array profiles the mutation status of 2 samples, while the 384-well array format profiles 8 samples, and each set of plates includes qPCR mastermix. Using real-time PCR, research studies can easily and reliably detect a panel of mutations in the CTNNB1 gene with this array.

For further details, consult the *qBiomarker Somatic Mutation PCR Handbook*.

Shipping and storage

qBiomarker Somatic Mutation PCR Arrays are shipped at ambient temperature or on blue ice packs. For long term storage, keep plates at –20°C. Ensure that you have the correct qBiomarker Somatic Mutation PCR Array format for your real-time cycler (see table above). qBiomarker Probe Mastermixes are shipped on blue ice packs. For long term storage, keep qBiomarker Probe Mastermixes at 4°C.

Note: Ensure that you have the correct qBiomarker Probe Mastermix, with the correct reference dye if required, for your instrument.

Note: Open the package and store the products appropriately immediately on receipt.

Assay table

Position	Gene	COSMIC ID	Nucleotide Change	Amino Acid Change	Assay Catalog #
A01	CTNNB1	5664	c.121A>G	p.T41A	SMPH003950A
A02	CTNNB1	5667	c.134C>T	p.S45F	SMPH003953A
A03	CTNNB1	5662	c.110C>T	p.S37F	SMPH003946A
A04	CTNNB1	5677	c.98C>G	p.S33C	SMPH003963A
A05	CTNNB1	5663	c.133T>C	p.S45P	SMPH003970A
A06	CTNNB1	5679	c.110C>G	p.S37C	SMPH003962A
A07	CTNNB1	5661	c.94G>T	p.D32Y	SMPH003956A
A08	CTNNB1	5669	c.98C>T	p.S33F	SMPH003964A
A09	CTNNB1	5676	c.122C>T	p.T41I	SMPH003952A
A10	CTNNB1	5670	c.101G>T	p.G34V	SMPH003948A
A11	CTNNB1	5671	c.101G>A	p.G34E	SMPH003960A
A12	CTNNB1	5675	c.109T>G	p.S37A	SMPH003985A
B01	CTNNB1	5672	c.94G>A	p.D32N	SMPH003957A
B02	CTNNB1	5673	c.98C>A	p.S33Y	SMPH003959A
B03	CTNNB1	5681	c.95A>G	p.D32G	SMPH003973A
B04	CTNNB1	6128	c.133_135delTCT	p.S45del	SMPH004022A
B05	CTNNB1	5686	c.100G>A	p.G34R	SMPH003974A
B06	CTNNB1	5668	c.94G>C	p.D32H	SMPH003967A
B07	CTNNB1	5682	c.97T>C	p.S33P	SMPH003969A
B08	CTNNB1	5666	c.110C>A	p.S37Y	SMPH003961A
B09	CTNNB1	5691	c.95A>T	p.D32V	SMPH003958A
B10	CTNNB1	5689	c.134C>G	p.S45C	SMPH004023A
B11	CTNNB1	5678	c.107A>C	p.H36P	SMPH003951A
B12	CTNNB1	5687	c.109T>C	p.S37P	SMPH003981A
C01	CTNNB1	5683	c.97T>G	p.S33A	SMPH003968A
C02	CTNNB1	5692	c.134C>A	p.S45Y	SMPH003995A
C03	CTNNB1	5684	c.100G>C	p.G34R	SMPH003983A
C04	CTNNB1	5674	c.104T>G	p.I35S	SMPH003993A
C05	CTNNB1	5708	c.119C>T	p.T40I	SMPH003987A
C06	CTNNB1	5690	c.95A>C	p.D32A	SMPH003965A
C07	CTNNB1	5733	c.143G>A	p.G48D	SMPH003935A
C08	CTNNB1	5737	c.157G>A	p.E53K	SMPH003937A
C09	CTNNB1	5685	c.133T>G	p.S45A	SMPH003966A
C10	CTNNB1	5709	c.146A>G	p.K49R	SMPH004177A
C11	CTNNB1	5996	c.14_241del228	p.A5_A80>D	SMPH004010A
C12	CTNNB1	5699	c.128C>T	p.A43V	SMPH003939A
D01	CTNNB1	17661	c.130C>G	p.P44A	SMPH004001A
D02	CTNNB1	5732	c.125C>G	p.T42R	SMPH004012A
D03	CTNNB1	6035	c.14_430del417	p.A5_Q143del	SMPH004103A
D04	CTNNB1	6070	c.82_402del321	p.Q28_H134del	SMPH004154A
D05	CTNNB1	24746	c.112_114GGT>CCC	p.G38P	SMPH003988A
D06	CTNNB1	5703	c.106C>T	p.H36Y	SMPH003989A
D07	CTNNB1	6098	c.97_98TC>CT	p.S33L	SMPH003994A
D08	CTNNB1	5758	c.127G>A	p.A43T	SMPH004040A
D09	CTNNB1	99000042	copy number	copy number	SMPH017204A
D10	CTNNB1	99000042	copy number	copy number	SMPH017204A
D11	SMPC	99000017	positive PCR control	positive PCR control	SMPH017179A
D12	SMPC	99000017	positive PCR control	positive PCR control	SMPH017179A
E01	CTNNB1	5664	c.121A>G	p.T41A	SMPH003950A
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H11	SMPC	99000017	positive PCR control	positive PCR control	SMPH017179A
H12	SMPC	99000017	positive PCR control	positive PCR control	SMPH017179A

Array layout

	1	2	3	4	5	6	7	8	9	10	11	12
A	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1
B	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1
C	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1
D	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1	SMPC	SMPC
E	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1
F	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1
G	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1
H	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1	CTNNB1	SMPC	SMPC

qBiomarker Somatic Mutation PCR Array products are intended for molecular biology applications. These products are not intended for the diagnosis, prevention, or treatment of a disease.

For up-to-date licensing information and product-specific disclaimers, see the respective QIAGEN kit handbook or user manual. QIAGEN kit handbooks and user manuals are available at www.qiagen.com or can be requested from QIAGEN Technical Services or your local distributor.

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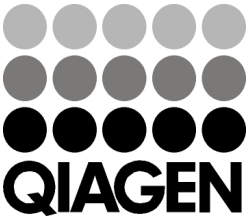

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