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TruSeq® Neurodegeneration Sequencing Panel

Get answers to frequently asked questions about this targeted sequencing solution for investigation of candidate genes associated with major neurodegenerative diseases.

What are the main features and benefits of the TruSeq Neurodegeneration Sequencing Panel?

- Affordable sequencing solution* with broad coverage of 118 genes associated with major neurodegenerative diseases
- Content targets protein-coding and regulatory regions: exons, introns, untranslated regions (UTRs), and promoters
- Integrated, streamlined workflow using Nextera® Rapid Capture library preparation chemistry

What neurodegenerative diseases are associated with genes included in the TruSeq Neurodegeneration Sequencing Panel?

- Alzheimer's Disease
- Parkinson's Disease
- Amyotrophic Lateral Sclerosis (ALS)
- Frontotemporal Dementia
- Dementia with Lewy Bodies
- Dystonia
- Early Onset Dementia

How was content for the panel selected?

Content was based on recently published findings. Targeted genes were selected as either risk-validated genes or genes with loci found via Genome-Wide Association Studies (GWAS).[1–9] Risk-validated loci have been established as risk loci associated with neurodegenerative diseases by published studies.

Will the full list of genes included on the panel be available for review?

Illumina can provide a gene list and a manifest file for the TruSeq Neurodegeneration Sequencing Panel under a standard confidential disclosure agreement (CDA).

What is included in a TruSeq Neurodegeneration Sequencing Panel Kit?

TruSeq Neurodegeneration Kits include all the reagents needed to prepare libraries, pool samples, and enrich for targeted regions with the Nextera Rapid Capture assay. After enrichment, the libraries are ready for sequencing.

Can multiple libraries be pooled for a single Rapid Capture reaction?

Yes, up to 12 tagmented samples can be pooled and processed together for the enrichment portion of the library prep protocol.

What is the minimum amount of DNA input for library prep?

The input requirement is 50 ng of genomic DNA (gDNA).

Are formalin-fixed, paraffin-embedded (FFPE) samples supported?

High-quality DNA is recommended for the standard protocol. DNA from FFPE samples is not currently supported for the TruSeq Neurodegeneration Sequencing Panel.

How long does it take to prepare sequencing-ready libraries?

Library preparation can be completed in 1.5 days (~30 hours) with ~5 hours of hands-on time. Libraries can be loaded onto an Illumina next-generation sequencing (NGS) platform on the afternoon of the second day.

What instruments can the libraries be sequenced on?

TruSeq Neurodegeneration libraries can be sequenced on any Illumina NGS platform. However, it would be more cost-effective to sequence on a NextSeq® Series or HiSeq® Series instrument than a MiSeq® System.

How is data generated with the TruSeq Neurodegeneration Sequencing Panel analyzed?

Data can be instantly transferred, stored, and analyzed securely in BaseSpace® Sequence Hub, the Illumina cloud-based genomics computing environment. BaseSpace Apps, featuring intuitive, push-button user interfaces can be used to analyze data generated with the TruSeq Neurodegeneration Sequencing Panel, without the need for bioinformatics expertise.

*Targeted sequencing of 118 genes is a more cost-effective solution, compared to whole-genome or whole-exome sequecing for tens of thousands of samples. The price point for this sequencing panel is similar to genotyping array products.

When can orders be placed for the TruSeq Neurodegeneration Sequencing Panel?
Illumina will begin accepting orders on July 17, 2017.

How are orders placed for the TruSeq Neurodegeneration Sequencing Panel?
The TruSeq Neurodegeneration Sequencing Panel cannot be ordered through the Illumina website. Please contact your local account representative or email consortiamanager@illumina.com and an Illumina representative will contact you to answer questions and help you place your order.

What is the minimum number of samples that can be ordered?
The minimum number of samples that can be ordered is 48 samples. There will be two kit configurations to choose from:
- TruSeq Neurodegeneration Sequencing Panel (24 indexes, 48 samples, 4 enrichments)
- TruSeq Neurodegeneration Sequencing Panel (96 indexes, 288 samples, 24 enrichments)

When will the TruSeq Neurodegeneration Sequencing Panel be shipping?
Shipping will begin in September of 2017.

References

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