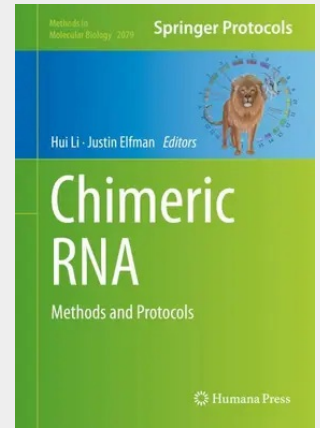


Chimeric RNA

Methods and Protocols

This book provides numerous methods for identification, validation, and functional characterization of chimeric RNAs, herein described as any transcript which contains the nucleotide sequence of two distinct parental genes. Beginning with identification and characterization through bioinformatics tools, the book continues with experimental validation using RT-PCR, hybridization methods for RNA, and the use of mass spectrometry data for fusion protein validation, as well as functional and mechanistic studies of chimeric RNAs and translational applications. Written for the highly successful *Methods in Molecular Biology* series, chapters include introductions to their respective topics, lists of the necessary materials and reagents, step-by-step, readily reproducible laboratory protocols, and tips on troubleshooting and avoiding known pitfalls. Authoritative and practical, *Chimeric RNA: Methods and Protocols* is an ideal guide to this expansive field and an inspiration to researchers seeking to further our knowledge of these remarkable features of the transcriptome.

Prediction, Characterization, and In Silico Validation of Chimeric RNAs.- Identification of Fusion Transcripts from Unaligned RNA-Seq Reads Using ChimeRScope.- Identification of Chimeric RNAs Using RNA-Seq Reads and Protein-Protein Interactions of Translated Chimeras.- Gene Fusion Discovery with INTEGRATE.- Case Study: Systematic Detection and Prioritization of Gene Fusions in Cancer by RNA-Seq: A DIY Toolkit.- Detection and Measurement of Chimeric RNAs by RT-PCR.- Detection of Group II Intron-Generated Chimeric mRNAs in Bacterial Cells.- RNase Protection Assay.- Validation of Chimeric Fusion Peptides Using Proteomics Data.- NanoString nCounter Technology: High-Throughput RNA Validation.- Knockdown of Chimeric RNA by RNAi.- Overexpression of Chimeric RNA by Retroviral Transduction.- Separation of Nuclear and Cytoplasmic Fractions for Chimeric RNA Characterization.- Confirmation of Transcriptional Read-Through Events by RT-PCR.- Validating Gene Fusion as the Source of Chimeric RNAs.- Chimeric RNA and Exosomes-Based Liquid Biopsy.- SMaRT for Therapeutic Purposes.- Case Study: Landscape of Chimeric RNAs in Bladder Cancer.- Case Study: The Recurrent Fusion RNA DUS4L-BCAP29 in Non-Cancer Human Tissues and Cells.



160,49 €

149,99 € (zzgl. MwSt.)

Lieferfrist: bis zu 10 Tage

Artikelnummer: 9781493999033

Medium: Buch

ISBN: 978-1-4939-9903-3

Verlag: Humana

Erscheinungstermin: 14.11.2019

Sprache(n): Englisch

Auflage: 1. Auflage 2020

Serie: Methods in Molecular Biology

Produktform: Gebunden

Gewicht: 722 g

Seiten: 262

Format (B x H): 183 x 260 mm

