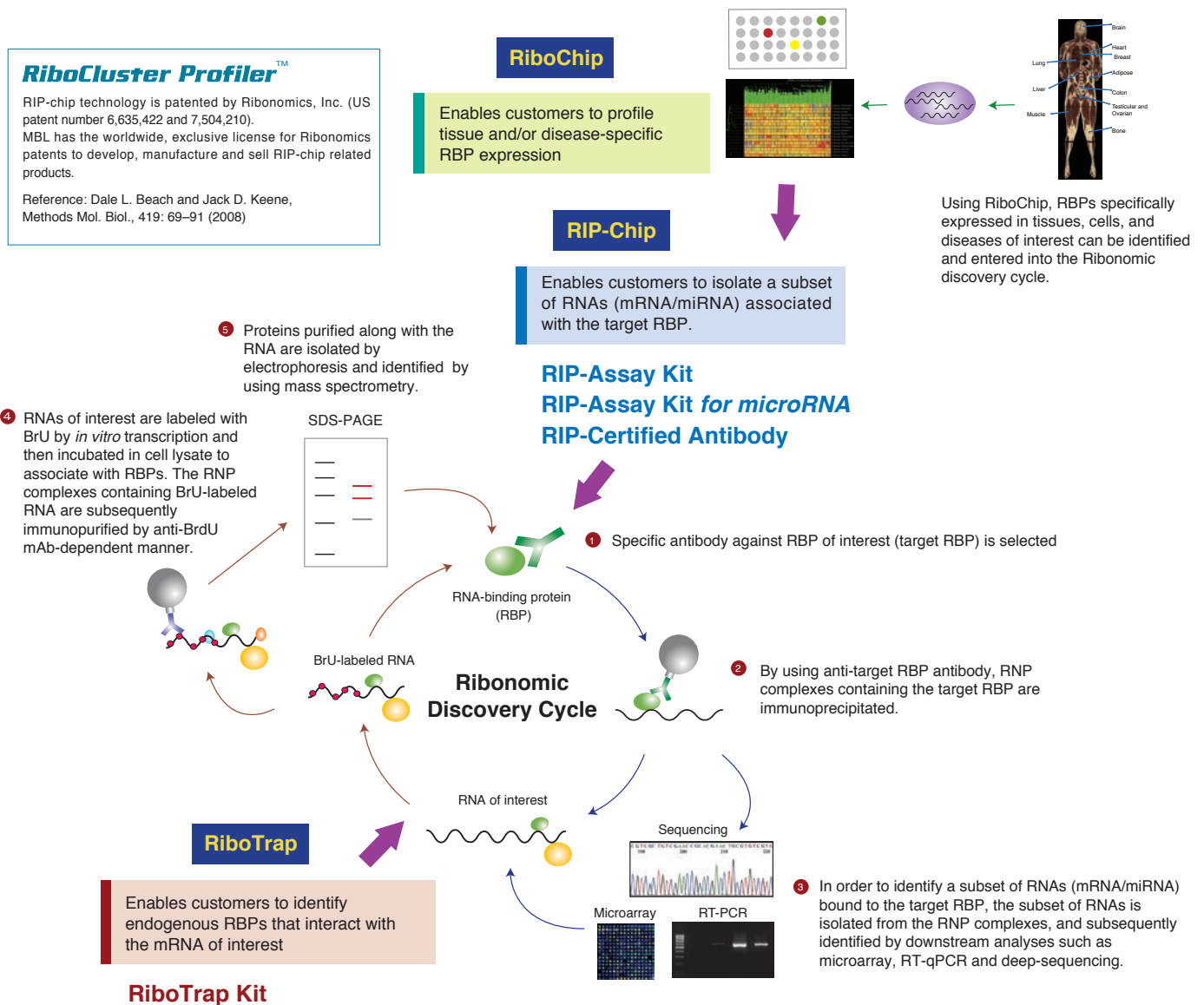
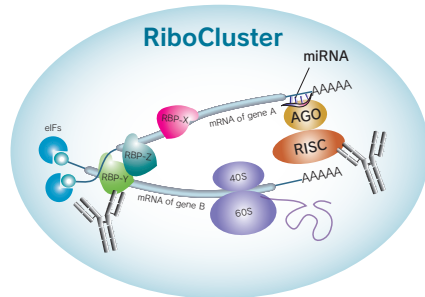


-Novel analysis tool for post-transcriptional regulation mechanism-

RiboCluster Profiler™ offers multiple entry points for customers who are concerned with certain genes, RBPs, tissues and/or diseases. Customers interested in specific diseases or tissues can identify disease-specific or tissue-specific RBPs using **RiboChip**. Following the use of RiboChip, RNP immunoprecipitation (RIP) can be performed by using an **RIP-Certified Antibody** to isolate mRNAs from RNP complexes. MBL offers **RIP-Assay Kit** (Code. RN1001), **RIP-Assay Kit for microRNA** (Code. RN1005) and **RIP-Certified Antibodies** for RNP immunoprecipitation. The isolated mRNAs, miRNAs and ncRNAs are available for sequential downstream analyses such as microarray, deep-sequencing and RT-qPCR. Data from RIP-Assay followed by downstream analysis provide customers with valuable information that cannot be obtained by a conventional gene expression analysis.

Customers interested in specific RNAs can also identify various RBPs that bind to the RNA of interest to understand protein components that make up the regulatory machinery for mRNA expression. MBL offers an immunopurification tool, **the RiboTrap Kit** (Code. RN1011/ RN1012), for the identification of RBPs that bind to RNAs of interest. Following the use of **RiboTrap**, RIP-chip or RIP-seq can be performed to understand regulatory components involved in the post-transcriptional regulation of gene expression or the biosynthesis of small RNAs and ncRNAs.





mRNAs and miRNAs associated with specific diseases or functions are considered to form clusters (RiboCluster) that are mediated by RNA binding proteins (RBPs). MBL products are useful to immunoprecipitate ribonucleoprotein (RNP) by using antibodies against the RBP, and allows the isolation/enrichment of mRNAs and miRNAs of each RiboCluster by extracting RNA from the RNP (i.e., RIP assay). As a consequence, cluster-specific mRNAs, as well as miRNAs, can be identified.



Literature on RiboCluster Profiler™ and related products

RIP-Assay Kit (Code. RN1001)

Field	Literature information
Oncology	Zhang LY <i>et al.</i> MicroRNA-144 promotes cell proliferation, migration and invasion in nasopharyngeal carcinoma through repression of PTEN. <i>Carcinogenesis</i> . 34, 454-63 (2013) (PMID: 23125220)
Immunology	Yoo JS <i>et al.</i> DHX36 enhances RIG-I signaling by facilitating PKR-mediated antiviral stress granule formation. <i>PLoS Pathog.</i> 10, e1004012 (2014) (PMID: 24651521)
Neuroscience	Takagi S <i>et al.</i> RNP2 of RNA recognition motif 1 plays a central role in the aberrant modification of TDP-43. <i>PLoS One</i> 8, e66966 (2013) (PMID: 23840565)
Virology	Mizutani T <i>et al.</i> 7SK small nuclear ribonucleoprotein complex is recruited to the HIV-1 promoter via short viral transcripts. <i>FEBS Lett.</i> 588, 1630-6 (2014) (PMID: 24607481)
Virology	Morita M <i>et al.</i> The lipid mediator protectin D1 inhibits influenza virus replication and improves severe influenza. <i>Cell</i> 153, 112-25 (2013) (PMID: 23477864)
Embryology	Tahara N <i>et al.</i> Celf1 is required for formation of endoderm-derived organs in zebrafish. <i>Int J Mol Sci.</i> 14, 18009-23 (2013) (PMID: 24005864)
Embryology	Ohno S <i>et al.</i> Polypyrimidine tract-binding protein regulates the cell cycle through IRES-dependent translation of CDK11(p58) in mouse embryonic stem cells. <i>Cell Cycle</i> . 10, 3706-13 (2011) (PMID: 22037210)

RIP-Assay Kit for microRNA (Code. RN1005)

Oncology	Comincini S <i>et al.</i> microRNA-17 regulates the expression of ATG7 and modulates the autophagy process, improving the sensitivity to temozolomide and low-dose ionizing radiation treatments in human glioblastoma cells. <i>Cancer Biol Ther.</i> 14, 574-86 (2013) (PMID: 23792642)
Oncology	Hoffman AE <i>et al.</i> Targetome profiling, pathway analysis and genetic association study implicate miR-202 in lymphomagenesis. <i>Cancer Epidemiol Biomarkers Prev.</i> 22, 327-36 (2013) (PMID: 23334589)
Oncology	Uchino K <i>et al.</i> Therapeutic effects of microRNA-582-5p and -3p on the inhibition of bladder cancer progression. <i>Mol Ther.</i> 21, 610-9 (2013) (PMID: 23295946)

RiboTrap Kit (Code. RN1011/RN1012)

Oncology	Saeki M <i>et al.</i> Exosome-bound WD repeat protein monad inhibits breast cancer cell invasion by degrading amphiregulin mRNA. <i>PLoS One.</i> 8, e67326 (2013) (PMID: 23844004)
Immunology	Masuda K <i>et al.</i> Arid5a controls IL-6 mRNA stability, which contributes to elevation of IL-6 level in vivo. <i>PNAS</i> 110, 9409-14 (2013) (PMID: 23676272)

RiboCluster Profiler™-related kits and antibodies have been used in various studies and have been reported in numerous articles and various other documents. Please see the website for more details.

Related products

Code.	Product name	Size
RN1001	RIP-Assay Kit	10 assays
RN1005	RIP-Assay Kit for microRNA	10 assays
RN1011/RN1012*	RiboTrap Kit	10 assays

*: Please note that RN1011 and RN1012 are sold together (accessories) but should be stored at different temperatures.

MBL offers a wide variety of RIP-Certified Antibodies and RBP Antibodies!

For more up-to-date information, please see the website.

<http://ruo.mbl.co.jp/je/rip-assay/>