Stephen Lin, J Cell Sci Ther 2015, 6:2
http://dx.doi.org/10.4172/2157-7013.S1.032

OMICS International
conferenceseries.com

5th World Congress on
Cell & Stem Cell Research

March 23-25, 2015 DoubleTree by Hilton Chicago - North Shore, USA

Proximity ligation assays, a method for ultra-sensitive protein detection

Stephen Lin
Thermo Fisher Scientific, USA

Quantitative PCR (qPCR) has revolutionized the study of cellular nucleic acids, including genomic DNA, mRNA and micro RNAs. Now TaqMan® Protein Assays, which are based on the proximity ligation assay (PLATM) technology, extend qPCR applications to the analysis of proteins through the amplification of a surrogate DNA template. This technology has been optimized for use with crude cell lysates, tissue homogenates, and blood samples and has been combined with TaqMan® chemistry to create a highly sensitive and specific process for measuring proteins. With its simple and rapid workflow akin to traditional qPCR techniques, PLA enables a broad range of applications that includes the analysis of proteins from complex or difficult samples such as serum and plasma, protein modifications such as phosphorylation, and protein and gene expression from a single sample and even a single cell in parallel on the same platform. Moreover, PLA is being applied in new ways to study normal and aberrant biological processes that are associated with homeostasis, growth and differentiation. The addition of TaqMan® Protein Assays to the qPCR assay repertoire marks the beginning of a new era in the analysis of proteins that will ultimately provide a better understanding of biological systems.

Biography

Stephen Lin received his Ph.D. from Washington University in St. Louis in 2002 and did his postdoctoral research at Harvard University. In 2006 he joined Stem-Cells,Inc of California as a scientist for liver cellular therapeutics, where he discovered pathways that contribute to the rapid decline of function and expansion of primary human hepatocytes. Since 2012 he has been staff scientist for early-stage product concepts at Life Technologies (now part of Thermo Fisher Scientific), a global life sciences company that develops and offers tools for every aspect of stem cell and gene therapy including genetic manipulation, genetic analysis, and cell culture.

stephen.lin@thermofisher.com

Notes: