

13th International Conference on

Laboratory Medicine & Pathology

June 25-26, 2018 | Berlin, Germany



Claudio Sorio

University of Verona, Italy

Role of of protein tyrosine phosphatase receptor type γ in chronic myeloid leukemia

Protein tyrosine phosphatase receptor gamma (PTPRG) is a ubiquitously expressed member of the protein tyrosine phosphatase family known to act as a tumor suppressor gene in many different neoplasms with mechanisms of inactivation including mutations and methylation of CpG islands in the promoter region. We identified a critical role in human hematopoiesis and describe a role as oncosuppressor in chronic myeloid leukemia (CML). We have described PTPRG expression in various tissues and recently developed a monoclonal antibody capable of recognizing the native antigen of this phosphatase by flow cytometry: we confirmed PTPRG protein downregulation in CML patients at diagnosis in the Philadelphia-positive myeloid lineage (including CD34+/CD38bright/dim cells). After effective tyrosine kinase inhibitor (TKI) treatment, its expression recovered in tandem with the return of Philadelphia-negative hematopoiesis. Of note, PTPRG mRNA levels remain unchanged in tyrosine kinase inhibitors (TKI) non-responder patients, confirming that downregulation selectively occurs in primary CML cells. We have also identified a novel regulative loop involving CTNNB1 gene. The availability of this unique antibody permits its evaluation for clinical application including the support for diagnosis and follow-up of these disorders. Evaluation of the role of PTPRG in health and disease is facilitated by the availability of a specific reagent capable to specifically detect its target in various experimental conditions.

Biography

Claudio Sorio has completed his MD from University of Verona, Italy and his PhD and Postdoctoral studies from Thomas Jefferson University, Philadelphia, USA. He specialized in Surgical Pathology at the same university. He is the Director of Cystic Fibrosis Traslational Research Laboratory "D Lissandrini" at the University of Verona and Head of the Biomarker Laboratory at the same institution. He has published more than 74 original papers and several reviews and book chapters in reputed journals and has been serving as an Editorial Board Member of reputed journals.

claudio.sorio@univr.it

Notes: