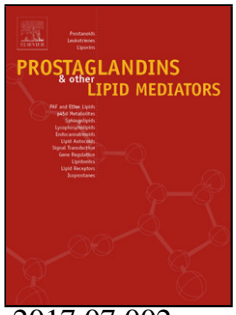

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Phosphatase activity of soluble epoxide hydrolase

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Highlights

- Soluble epoxide hydrolase exhibits lipid phosphatase activity located in a distinct N-terminal domain
- sEH-P domain regulates the sub-cellular localization of sEH
- Several lipid phosphates have been identified as substrates of sEH-P in vitro
- High-throughput assays have been developed to study sEH-P ligands

Abstract

Soluble epoxide hydrolase (sEH) is a bifunctional enzyme that exhibits lipid epoxide hydrolase (sEH-H) and lipid phosphatase activity (sEH-P), with each being located in its own distinct domain. While the epoxide hydrolase activity is well-investigated, the role of the phosphatase domain remains unclear. This article briefly summarizes the evolution, structure and SNPs of the human sEH, with a special focus on the function and postulated role of the N-terminal domain of sEH. Furthermore, the article provides an overview of tools to study sEH-P.

Keywords: Soluble epoxide hydrolase; phosphatase; lipid phosphates; assay systems