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Titolo	SH Domains : Structure, Mechanisms and Applications // edited by Natalya Kurochkina
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ISBN	3-319-20098-4
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Descrizione fisica	1 online resource (252 p.)
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Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	SH3 Domains as Suitable Models to Study Amyloid Aggregation -- SH Domain Proteins in Plants: Roles in Signaling Transduction and Membrane Trafficking -- Versatility of SH3 Domains in the Cellular Machinery -- Structure-Function Relationship of Bacterial SH3 Domains -- Activation of PI3K by Thyroid Hormone Nuclear Receptors -- SH Domains' Interaction with SliMs: Maximizing Adaptivity of Signaling Networks -- SH Domains and Epidermal Growth Factor Receptor -- SH2 Domain Structures and Interactions -- Cytoskeletal Signaling by Src Homology Domain-Containing Adaptor Proteins -- Structure and Function of Jak3- SH2 Domain -- Helical Assemblies and SH Domains.
Sommario/riassunto	This book covers structure, function, and important roles of the SH domains, structure-function relationships, the versatile nature of their action, mechanisms of aggregation, specificity of interactions, impact of mutations on protein functional dysregulation, and cell signaling. Their involvement in various cellular processes such as migration, invasiveness, actin reorganization, shaping spines, determination of the morphology assembly of fibrils, and mechanotransduction makes these

molecules attractive drug targets. Substrates, inhibitors and activators of PTKs present a wide variety of therapeutic agents in the context of delivering treatments for numerous pathologies. The new emerging field of stem cell therapies and design of biomaterials for treatments relies on the directed regulation of stem cell growth, differentiation and morphology, as well as the production of biomimetic scaffolds that respond to programmed signals. Advances in deciphering the mechanisms of action of these important molecules will lead to the implementation and success of their vital applications.
