1. Record Nr. UNINA9910150457103321

Titolo	Adhesion G Protein-coupled Receptors : Molecular, Physiological and Pharmacological Principles in Health and Disease / / edited by Tobias Langenhan, Torsten Schöneberg
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2016
ISBN	3-319-41523-9
Edizione	[1st ed. 2016.]
Descrizione fisica	1 online resource (XIV, 403 p. 68 illus., 67 illus. in color.)
Collana	Handbook of Experimental Pharmacology, , 0171-2004 ; ; 234
Disciplina	613
Soggetti	Pharmacology Human physiology Human genetics Cytology Clinical biochemistry Pharmacology/Toxicology Human Physiology Human Genetics Cell Biology Medical Biochemistry
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	PART I. Molecular and Pharmacological Properties of Adhesion GPCRs:-Classification, Nomenclature and Structural Aspects of Adhesion GPCRs -- 7TM Domain Structure of Adhesion GPCRs -- Understanding the Structural Basis of Adhesion GPCR Functions.-Control of Adhesion GPCR Function Through Proteolytic Processing.-Tethered Agonism: A Common Activation Mechanism of Adhesion GPCRs -- Versatile Signaling Activity of Adhesion GPCRs -- Adhesion GPCR-Related Protein Networks.-The Relevance of Genomic Signatures at Adhesion GPCR Loci in Humans -- PART II: Adhesion GPCRs as Pharmakotargets in Organ Function and Development -- Adhesion GPCRs as a Putative Class of Metabotropic Mechanosensors -- Adhesion GPCRs Govern

	Polarity of Epithelia and Cell Migration -- Adhesion GPCRs as Novel Actors in Neural and Glial Cell Functions: From Synaptogenesis to Myelination.-Control of Skeletal Muscle Cell Growth and Size Through Adhesion GPCRs -- Adhesion GPCR Function in Pulmonary Development and Disease.-Adhesion GPCRs as Modulators of Immune Cell Function.-Heart Development, Angiogenesis, and Blood-Brain Barrier Function is Modulated by Adhesion GPCRs.-Adhesion GPCRs in Tumorigenesis.
Sommario/riassunto	Latest research on Adhesion GPCRs has unearthed surprising revelations about the events that govern the signal transduction of these receptor molecules and the cellular and organ requirements for these signals. Unexpected and unprecedented findings suggest that Adhesion GPCRs constitute a group of receptors that sense mechanical stimuli and transcode them into metabotropic signals through the action of a novel activation paradigm. Interdisciplinary efforts transcending many areas of biomedical research including pharmacology, physiology, genetics, cell biology, structural biology, biochemistry and bioinformatics were necessary to unveil these fundamental properties. The scientific leaders in the field that carried this research effort have teamed up here to provide a comprehensive overview of our current understanding, how Adhesion GPCRs signal and how these receptors shape organ structure and function.