Endorepellin binds KDR (VEGFR2)

Jupe, S., Ricard-Blum, S.
Introduction

Reactome is open-source, open access, manually curated and peer-reviewed pathway database. Pathway annotations are authored by expert biologists, in collaboration with Reactome editorial staff and cross-referenced to many bioinformatics databases. A system of evidence tracking ensures that all assertions are backed up by the primary literature. Reactome is used by clinicians, geneticists, genomics researchers, and molecular biologists to interpret the results of high-throughput experimental studies, by bioinformaticians seeking to develop novel algorithms for mining knowledge from genomic studies, and by systems biologists building predictive models of normal and disease variant pathways.

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Literature references


Reactome database release: 73

This document contains 1 reaction (see Table of Contents)
Endorepellin binds KDR (VEGFR2)

Stable identifier: R-HSA-4088281

Type: binding

Compartments: plasma membrane, extracellular region

Endorepellin is the C-terminal domain V of perlecan, constituting amino acids 3687–4391 (Mongiat et al. 2004). It has anti-angiogenic properties, blocking endothelial cell adhesion to fibronectin and type I collagen (Mongiat et al. 2003). Endorepellin and a smaller fragment constituting the third laminin G–like (LG) domain (LG3) disrupt actin stress fibers and focal adhesions via an interaction with the collagen receptor alpha2beta1 integrin (Bix et al. 2004). The first and second laminin G domains 1 of endorepellin bind specifically and with high affinity to Ig domains 3–5 of VEGFR2 (Willis et al. 2013).

Literature references

Willis, CD., Poluzzi, C., Mongiat, M., Iozzo, RV. (2013). Endorepellin laminin-like globular 1/2 domains bind Ig3-5 of vascular endothelial growth factor (VEGF) receptor 2 and block pro-angiogenic signaling by VEGFA in endothelial cells. FEBS J., 280, 2271-84.

Editions

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