EOR-2 Is an Obligate Binding Partner of the BTB–Zinc Finger Protein EOR-1 in Caenorhabditis elegans

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ABSTRACT

BTB-zinc finger transcription factors play many important roles in metazoan development. In these proteins, the BTB domain is critical for dimerization and for recruiting cofactors to target genes. Identification of these cofactors is important for understanding how BTB-zinc finger proteins influence transcription. Here we show that the novel but conserved protein EOR-1 is an obligate binding partner of the BTB-zinc finger protein EOR-1 in Caenorhabditis elegans. EOR-1 and EOR-2 function together to promote multiple Ras/ERK-dependent cell fates during development and we show that EOR-1 is a robust substrate of ERK. EOR-1 is tightly regulated and exhibits only a single band on Western blotting. EOR-2 is not found in extracts of developing embryos and is not expressed in the larval stage. EOR-2 and EOR-1 are both highly conserved in evolution and are expressed in all regions of the body. In the absence of EOR-2, EOR-1 is prematurely degraded, leading to the misregulation of multiple Ras/ERK-dependent cell fates.

The localization of EOR-2 is different from that of EOR-1. The EOR-1 binding partner can be modulated by the EOR-2 binding partner, which results in the misregulation of Ras/ERK-dependent cell fates.

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Gene Summary for eor-2

Specifying a gene using a gene symbol (EOR-2), a predicted gene id (115439.4), or a protein id (CE03711) eor-2

代谢物-1 (115439.4) 通过分子反应（enhancer）通过分子反应（enhancer）通过分子反应（enhancer）通过分子反应（enhancer）通过分子反应（enhancer）