

TITLE: IMP2 Expression In The Mouse Nervous System

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ABSTRACT: Insulin-like growth factor-II (IGF-II) mRNA-binding protein-2 (IMP2) is one of the three homologs (IMP1-3) that play important roles in the posttranscriptional regulation of gene expression in several tissues. IMP1/ZBP1 (zipcode binding protein) has been shown to play important roles in axon guidance and regeneration by regulating the localization and translation of specific mRNAs. However, the function of IMP2 is least understood, largely because an isoform-specific antibody is not available, which makes the conventional techniques to locate protein expression not feasible. We custom made an IMP2-specific antibody. We used Western blot and immunocytochemistry to test its specificity on cultured cells following overexpression of IMP 1-3 isoforms, respectively. Using this IMP2-specific antibody, we examined IMP2 expression in the mouse nervous system. We found that IMP2 expression in the nervous system is sustained postnatally, unlike that of IMP1 and IMP3. Ongoing experiments are aimed at further understanding IMP2 expression patterns during injury and assessment of its role to facilitate mRNA localization during axon regeneration in the adult nervous system.

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