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论著

原位杂交研究GPRC6A mRNA在小鼠组织中的分布规律

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摘要：

目的：探讨G蛋白偶联受体C组6A（G protein-coupled receptor family C, group 6, subtype A, GPRC6A）mRNA在小鼠体内的分布规律。方法：比较传统和TSA信号放大系统分析石蜡包埋的小鼠组织中GPRC6A mRNA的分布情况。为了确保信号特异性，将GPRC6A基因剔除小鼠组织放在同一张切片上作阴性对照。结果：建立了一种用非同位素标记的互补RNA探针原位杂交检测石蜡包埋的小鼠组织中低表达GPRC6A mRNA 的方法。TSA信号放大系统明显提高原位杂交检测该受体的敏感性。GPRC6A基因剔除小鼠组织中没有可测信号。GPRC6A mRNA至少在消化腺、副消化腺中表达，同时也在肾、睾丸、子宫、脑、肌肉脂肪中有表达。结论：GPRC6A mRNA 的分布模式与GPRC6A基因剔除小鼠的基因表型基本一致。

关键词： GPRC6A mRNA 小鼠 分布模式 TSA信号放大系统 原位杂交

Distribution pattern of GPRC6A mRNA in mouse tissue by in situ hybridization

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Abstract:

ObjectiveTo explore the distribution pattern of G protein-coupled receptor family C, group 6, subtype A (GPRC6A) mRNA in adult mice. MethodsThe distribution of GPRC6A mRNA in paraffin embedded adult mouse tissues was determined by highly sensitive nonradioactive cRNA probe in situ hybridization (ISH). We compared ISH with and without addition of tyramide signal amplification (TSA). GPRC6A wild-type and littermate GPRC6A null mice tissue sections were investigated by ISH. ResultsTSA greatly increased the sensitivity of ISH to detect GPRC6A mRNA in wild type mouse tissues. There was no detection of GPRC6A mRNA in GPRC6A gene specific knockout tissue in paraffin embedded tissue section. The mRNA of GPRC6A was detectable in the digestive gland or accessory digestive gland including salivary gland and pancreas, as well as in the tissues including kidney, testis, brain, muscle, and fat. ConclusionThe mRNA distribution pattern of GPRC6A gene is compatible with the phenotype of GPRC6A knockout mice.

Keywords: GPRC6A；mRNA；mouse；distribution pattern；tyramide signal amplification；in situ hybridization

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