

苦瓜子蛋白的分离纯化及其性质研究

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收稿日期 修回日期 网络版发布日期 接受日期

摘要 从苦瓜种子的粗提物苦瓜子蛋白丙酮分级沉淀干粉中,用CM-SephadexC-50和SephadexG-75分离得到了两个核糖体失活蛋白, α -苦瓜子蛋白(α -momorcharin, α -MMC)和 β -苦瓜子蛋白(β -momorcharin, β -MMC),其等电点分别为9.10(α -MMC),9.32(β -MMC)。用ESI-MS和MALDI-TOF-MS测定它们的分子量,分别为28625(α -MMC),29076(β -MMC)(+Na,29099);28795(α -MMC),29074.7(β -MMC)。它们都是糖蛋白。其生物活性的分析测定表明,都属于RNAN-糖苷酶。本文重点对 β -苦瓜子蛋白的分离纯化及其性质进行详细报道,并对其N-端部分的氨基酸顺序进行了测定。

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分类号 [O629](#) [Q51](#)

Isolation and characterization of α , β -momorcharins

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Abstract Two ribosome-inactivating proteins (RIP's), α - and β - momorcharin (α - and β -MMC) have been isolated from the seeds of bitter melon (*Momordica charantia*), a traditional Chinese folk medicine. This was done by acetone fractionation and chromatographies on CM-Sephadex C- 50 and Sephadex G-75. The molecular weights of the purified proteins as determined by ESI-MS and MALDI-TOF-MS were 28625 (α -MMC), 29076 (β -MMC) and 28795 (α -MMC), 29074 (β -MMC), respectively. Both of them were found to be glycoproteins and have pI values of 9.10 (α -MMC) and 9.32 (β -MMC). Biological activity assay revealed both of them were RNAN-glycosidase and depurinate 28S rRNA in the ribosomes in a manner identical to that of trichosanthin. Here the isolation, physicochemical properties and N-terminal amino acid sequence of β - MMC are described.

Key words [SEPARATION](#) [PURIFICATION](#) [GLYCOSIDASE](#) [GLYCOPROTEIN](#) [BIOLOGICAL ACTIVITY](#) [AMINO ACID SEQUENCE ANALYSIS](#) [MOMORDICA CHARANTIA](#) [CUCURBITACEAE](#)

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