

Therapeutic Activity of Co(II) Coordination Polymer on Lupus Nephritis by Reducing B4-H7+ dendritic Cell Activity

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SUMMARY. One new coordination polymer [Co(L1)(L2)] (1) {H₂L1 = 5-[4-1,2,3,4-tetrazolidin-5-yl] phenoxy] benzene-1,3-dicarboxylic acid, L2 = 4-[3-(pyridin-4-yl) propyl] pyridine} has been synthesized by the solvothermal reaction, crystallizing in the triclinic crystal system with *P*-1 space group, which displays a 1D chain structure. The neighboring chains were further connected by the intermolecular interactions to give a supramolecular structure. The solid sample of 1 has been further characterized by single-crystal X-ray diffraction, power X-ray diffraction, FT-IR spectra, elemental analysis and so on. The application values of the new compound on the lupus nephritis were evaluated and the related mechanism was explored at the same time. The real time RT-PCR was firstly conducted to measure the relative expression of B4 and H7 on the dendritic cell. In addition to this, the IFN- γ content released into the serum was further measured with ELISA assay.

RESUMEN. RESUMEN. Un nuevo polímero de coordinación [Co(L1)(L2)] (1) {H₂L1 = ácido 5-[4-1,2,3,4-tetrazolidin-5-il]fenoxi]benceno-1,3-dicarboxílico, L2 = 4-[3-(piridin-4-il) propil] piridina} se ha sintetizado mediante la reacción solvotérmica, cristalizando en el sistema cristalino triclínico con grupo espacial P-1, que muestra una estructura de cadena 1D. Las cadenas vecinas se conectaron aún más por las interacciones intermoleculares para dar una estructura supramolecular. La muestra sólida de 1 se caracterizó además mediante difracción de rayos X monocristalinos, difracción de rayos X de potencia, espectros FT-IR, análisis elemental, etc. Se evaluaron los valores de aplicación del nuevo compuesto en la nefritis lúpica y, al mismo tiempo, se exploró el mecanismo relacionado. En primer lugar, se realizó la RT-PCR en tiempo real para medir la expresión relativa de B4 y H7 en la célula dendrítica. Además de esto, el contenido de IFN- γ liberado en el suero se midió más con el ensayo ELISA.

KEY WORDS: coordination polymer, ELISA assay, lupus nephritis,

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