عنوان مقاله:

Preparation and preliminary studies of [۶۴Cu]-antiMUC-۱ for breast cancer targeting

محل انتشار:

تعداد صفحات اصل مقاله: 16

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خلاصه مقاله:

PR۸۱ is a monoclonal antibody that binds with high affinity to MUC۱ that over expressed on breast tumors. PR۸۱ is considered a suitable targeting molecule that was radiolabeled using Cu-۶۴ for positron imaging studies. The monoclonal antibody was conjugated with DOTA moiety and after purification was evaluated for radiochemical purity, immunoreactivity, cell toxicity and structure integrity as well as biodistribution study in normal rats. The radiolabeled antibody prepared with acceptable radiochemical purity (> ۹۳.۲ ± ۰.۶ %, ITLC; specific activity; ۴.۶ μCi/μg), protein structure integration, significant cytotoxicity and significant immunoreactivity retention was assessed by radioimmunoassay (RIA). Animal biodistribution of the ۶۴Cu-DOTA-PR۸۱ was consistent with other radiolabeled antibodies. The results showed that ۶۴Cu-DOTA-PR۸۱ may be considered for tumor imaging for ultimate diagnosis and follow-up of MUC۱ expression in oncology.

کلمات کلیدی:

Copper-۶۴, PR۸۱, MUC۱, tumor, biodistribution

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