Table 2. Study Design for Accelerator-Produced Ac-225 Biokinetic/Toxicity Evaluation in Female Swiss-Webster Mice.a

Injection dose level*a*: Fixed at activities relevant to clinical applications (50 nCi/animal)

Euthanasia time: Between 1 h and 10 d post-injection

Study duration: 10 days, in-life

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Group** | **#Animals** | **Injection Time** | **Necropsy Time** | **Ac Chemical Form** | **Total Activity Concentration** | **225Ac Molar Concentrationc** | **227Ac Molar Concentration** | **Injection Volume** | **Injection Level per Animal (μCi)** |
| Group 1 | 3F | 0 | 1 h | IgG-DOTA chelateb | 0.25 μCi/mL | 10.5 pM | NA | 0.2 mL | 0.05 |
| Group 2 | 3F | 0 | 4 h | IgG-DOTA chelateb | 0.25 μCi/mL | 10.5 pM | NA | 0.2 mL | 0.05 |
| Group 3 | 3F | 0 | 24 h | IgG-DOTA chelateb | 0.25 μCi/mL | 10.5 pM | NA | 0.2 mL | 0.05 |
| Group 4 | 3F | 0 | 6 d | IgG-DOTA chelateb | 0.25 μCi/mL | 10.5 pM | NA | 0.2 mL | 0.05 |
| Group 5 | 3F | 0 | 10 d | IgG-DOTA chelateb | 0.25 μCi/mL | 10.5 pM | NA | 0.2 mL | 0.05 |

*a*Contamination is achieved by intravenous injection in a warmed lateral tail vein of the challenge chelated isotope. Animals are housed in metabolism cages, per randomization group (n = 3). Urine and fecal pellets are collected daily until necropsy. Blood, liver, kidneys, spleen, heart, lungs, thymus, abdominal tissue remainder, skeleton, and soft tissue remainder samples collected at scheduled necropsy and processed for analysis. Counting is done on a γ counter and on a α/β LSC counter. Samples are counted promptly (4 h) after processing and repeatedly over 100 days to allow for equilibration of first Ac-225 and later Ac-227 daughter products. Total Animals = 15F

5 mL @ 250 nCi/mL 🡪 1.50 uCi since one extra group sentinel

The Ac molar conc doesn’t seem right