Electronic Supplementary Information

Syntheses of mGluR5 PET Radioligands through the Radiofluorination of Diaryliodonium Tosylates

Sanjay Telu, Joong-Hyun Chun, Fabrice G. Siméon, Shuiyu Lu, and Victor W. Pike*

Molecular Imaging Branch, National Institute of Mental Health, National Institutes of Health, Rm. B3 C346A, 10 Center Drive, Bethesda MD 20892-1003, USA.
E-mail: pikev@nih.gov; Fax: +1 301 480 5112; Tel: +1 301 594 5986.

Appendix 1. ¹H, ¹⁹F and ¹³C NMR spectra 2–38
Appendix 2. Selected radio-HPLC chromatograms 39–50
Appendix 1. $^1$H, $^{19}$F and $^{13}$C NMR spectra

Compound 5a
Compound 5a
Compound 5b
Compound 5b
Compound 5b
Compound 5c
Compound 5c
Compound 5c
Compound 5d
Compound 5d
Compound 5e
Compound 5e
Compound 5e
Compound 6a
Compound 6a
Compound 6b
Compound 6b
Compound 6b
Compound 6c

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Compound 6c
Compound 6c
Compound 7a
Compound 7a
Compound 7b
Compound 7b
Compound 7b
Compound 7c
Compound 7c
Compound 7c
Compound 8a
Compound 8b
Compound 8b
Compound 8b
Compound 8c
Compound 8c
Compound 8c
Appendix 2. Selected radio-HPLC chromatograms

2.1. Syntheses of $[^{18}F]2a$-c in micro-reactor

2.1.1. $[^{18}F]2a$ from 8a
2.1.2. $[^{18}\text{F}]2\text{b}$ from 8b
2.1.3. $[^{18}F]2e$ from bromo-precursor 5e
2.1.4. $[^{18}\text{F}]2\text{c}$ from 7c
2.2.1. With separate infusion of 7c and $[^{18}\text{F}] \text{F}^-\text{K}^+\text{K}$, production activity scale in micro-reactor
2.2.2. With infusion of premixed 7c and $[^{18}\text{F}]$F$^-$-K$^+$-K 2.2.2 on production activity scale in micro-reactor
2.3. Syntheses of $[^{18}\text{F}]2\text{a-c}$ in a Synthia module

2.3.1. $[^{18}\text{F}]2\text{a}$ from 8a

a. Semi-preparative HPLC chromatogram
b. Analytical HPLC chromatogram of the $[^{18}F]2a$ for measurement of specific radioactivity

Note: Radio-peaks are ~0.2 min behind corresponding UV peaks due to configuration in Bioscan and UV detectors.
2.3.2. $[^{18}F]2b$ from 8b

a. Semi-preparative HPLC chromatogram
b. Analytical HPLC chromatogram of the $[^{18}\text{F}]2\text{b}$
2.3.3. $[^{18}\text{F}]_2\text{c}$ from 7c

a. Semi-preparative HPLC chromatogram
b. Analytical HPLC chromatogram of the $[^{18}\text{F}]2\text{c}$