



**APPLICATION NOTE
E184OQG-001**

Quantification of Monoaminergic Neurotransmitters in Mice Brains

Abstract

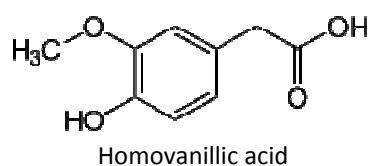
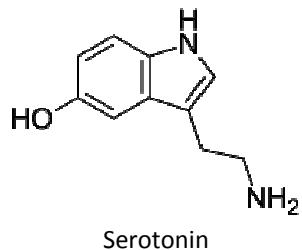
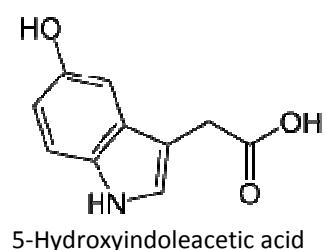
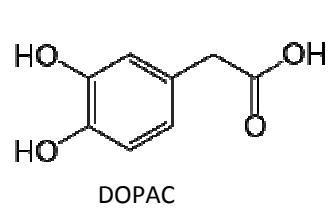
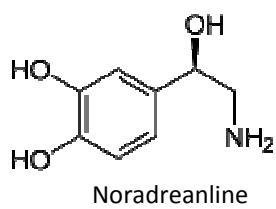
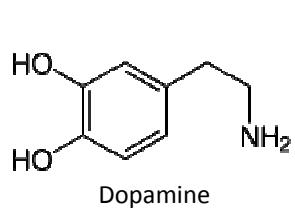
The present method was used to determine the concentrations of monoaminergic neurotransmitters and corresponding metabolites in brains of homozygous knockout mice. In detail, the quantified substances were dopamine, noradrenaline, serotonin, 3,4-dihydroxyphenylacetic acid, 5-hydroxyindoleacetic acid, and homovanillic acid, respectively. For details, please refer to the cited reference.

Keywords

- Monoaminergic Neurotransmitters
- Dopamine
- Noradrenaline
- Serotonin
- 3,4-Dihydroxyindoleacetic acid
- DOPAC
- 5-Hydroxyindoleacetic acid
- Homovanillic acid

Compound information

| Classification | Compound name |
|---------------------------|--|
| Catecholamines | Dopamine |
| | Noradrenaline |
| Catecholamine metabolites | DOPAC = 3,4-Dihydroxyphenylacetic acid |
| | 5-Hydroxyindoleacetic acid |
| | Homovanillic acid |
| Tryptamines | Serotonin |



Chromatographic conditions

| | |
|--|--|
| Column | VDSpher® OptiAqua PUR 100 C18 |
| Particle Size, Length × inner diameter | 3 µm, 150 × 2.1 mm |
| Order number | N1521E184OQG |
| Separation mode descriptions | analytical, reversed phase |
| Mobile Phase | A: Water (50 mM sodium citrate, 2.1 mM octyl sodium sulfate, 0.1 mM EDTA, 10 mM NaCl) B: Methanol pH = 4 |
| Elution conditions | Isocratic A = 77 vol% / B = 23 vol% |
| Flow rate | |
| Injection | 10 µl |
| Column temperature | 37 °C |
| Pressure | |
| HPLC system | Antec LC-100 isocratic pump, Spark Triathlon autosampler Detection: Decade II electrochemical detector |
| Sample and sample preparation | Please refer to page 3 of publication (see References) |

Chromatograms

not available

Origin

Oliver von Bohlen und Halbach

Universitätsmedizin Greifswald (University Medicine Greifswald)

Institut für Anatomie und Zellbiologie (Institute of Anatomy and Cell Biology)

References

"Impact of a Deletion of the Full-length and Short Isoform of p75NTR on Cholinergic Innervation and the Population of Postmitotic Doublecortin Positive Cells in the Dentate Gyrus"

Robert Poser, Martin Dokter, Viola von Bohlen und Halbach, Stefan M. Berger, Ruben Busch, Marian Baldus, Klaus Unsicker, Oliver von Bohlen und Halbach

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