

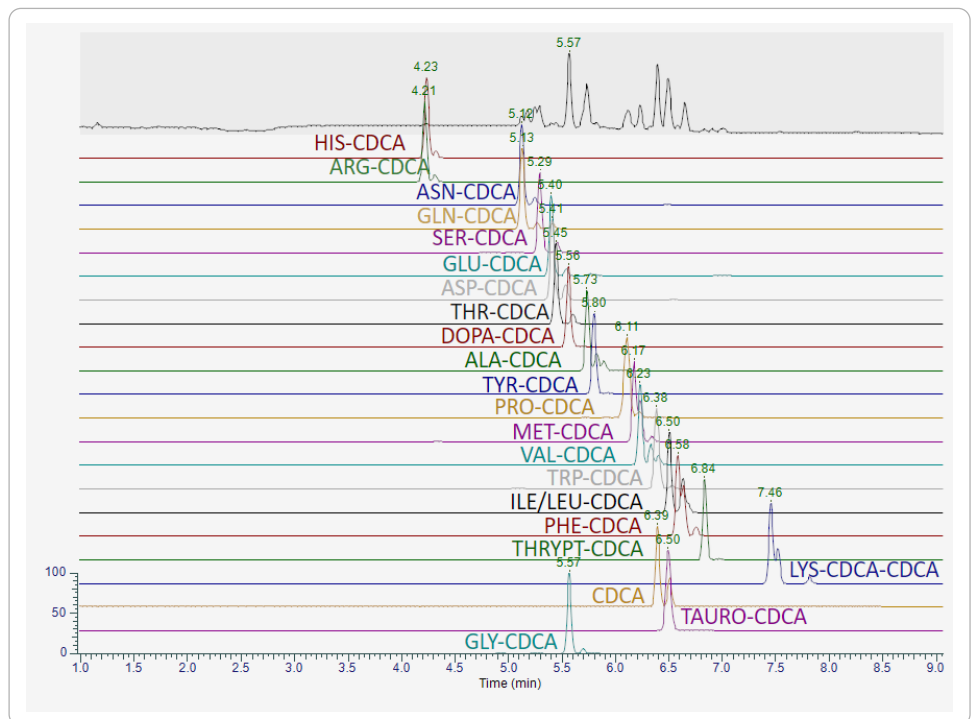
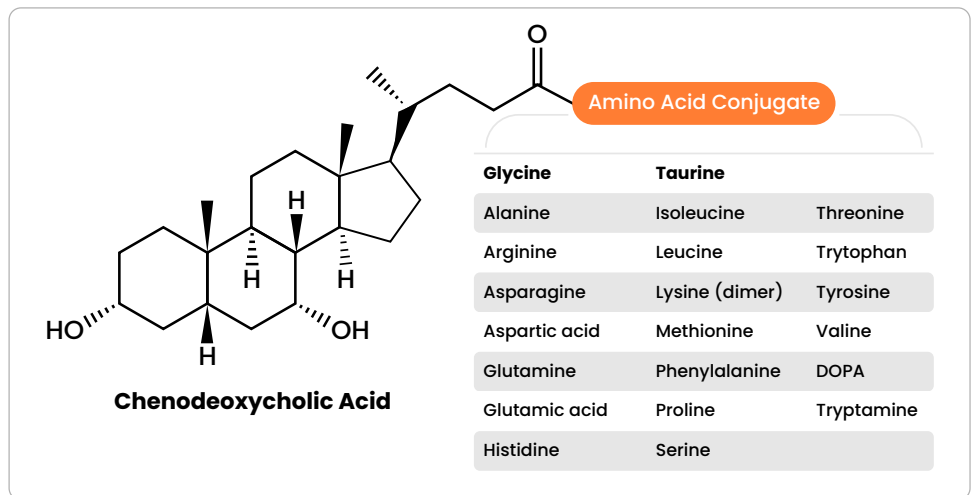
# CHENODEOXYCHOLIC ACID Conjugated Pooled Standards



Redefine host–microbiome relationships with 22 unique microbially–derived bile acid compounds

Gut microbes convert liver–produced bile acids into secondary bile acids with diverse chemistry and biological impact on humans and animals. Hundreds of these compounds were recently discovered in mammals with yet–to–be–discovered biological functions and health impacts<sup>1,2</sup>.

Amide conjugations to chenodeoxycholic acid and other bile acids represent a novel class of next–generation biomarkers with the potential to revolutionize the treatment and diagnostics of gut microbiome–related diseases, including inflammatory bowel disease and cystic fibrosis<sup>3</sup>. You can now participate in this exciting research and development field using these pooled standards of chenodeoxycholic acid amidates (amine conjugates to the carboxylic acid of chenodeoxycholic acid) and your expertise in liquid chromatography (LC) and mass spectrometry (MS).



Reverse phase chromatogram of chenodeoxycholic acid amidates mixture

<sup>1</sup>Quinn, Melnik, et al. (2020) *Nature*. [Global chemical effects of the microbiome include new bile-acid conjugations](#)

<sup>2</sup>Dorrestein, Melnik, Aksenov, Quinn. [US Patent Application \(#20220202881\) for Bile Acids and Use in Disease Treatment](#)

<sup>3</sup>Gentry, Collins, et al. (2023) *Nature*. [Reverse metabolomics for the discovery of chemical structures from humans.](#)

## Product Characteristics:

<b>Compounds</b>	<ul style="list-style-type: none"><li>22 microbial cholic amidates plus unconjugated chenodeoxycholic acid</li></ul>
<b>Applications</b>	<ul style="list-style-type: none"><li>Biomarker discovery</li><li>Host-microbe interactions</li><li>Microbiome analysis &amp; profiling</li><li>Bile acid metabolism</li><li>Bile salt hydrolase/N-Acyl transferase activity assessments</li></ul>
<b>Contents</b>	<ul style="list-style-type: none"><li>5 mg dry powder (lyophilized)</li><li>Aliquoted into glass vials</li></ul>
<b>Analytical Examples</b>	<ul style="list-style-type: none"><li>Compound identification</li><li>MS2 transitions</li><li>Retention time acquisition</li><li>In-house digital library</li><li>Method development</li><li>Biomarker quantification</li></ul>
<b>Suitable for</b>	<ul style="list-style-type: none"><li>HPLC</li><li>UHPLC</li></ul>
<b>MS compatibility</b>	<ul style="list-style-type: none"><li>QTOF</li><li>Orbitrap</li><li>Single quadrupole</li><li>Triple quadrupole</li></ul>
<b>Concentration*</b>	<ul style="list-style-type: none"><li>200 µg/mL</li></ul>
<b>Internal standard</b>	<ul style="list-style-type: none"><li>Chenodeoxycholic acid (unconjugated)</li><li>Quantity provided:<ul style="list-style-type: none"><li>Glycochenodeoxycholic acid (GLY-CDCA)</li><li>Taurochenodeoxycholic acid (TAURO-CDCA)</li></ul></li></ul>
<b>Certificate of Analysis<sup>^</sup></b>	<ul style="list-style-type: none"><li>Reference retention times</li><li>Mass spectra</li></ul>

\*Estimated from glycine and taurine conjugates

<sup>^</sup> acquired under standard HPLC-MS conditions

## Common Analytical Applications:

- Build an in-house library of retention times and mass spectra for compound identification
- Acquire and optimize MS/MS transitions for quantitative analysis
- Calibrate retention times of conjugated bile acids after changing LC method or column

## Laboratory Chemical Safety Summary Datasheet Links #:

[Taurochenodeoxycholic Acid](#) >

[Glycochenodeoxycholic Acid](#) >

#No chemical safety information is currently available for all other novel amidates