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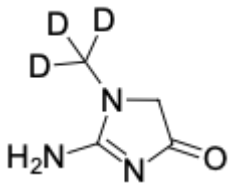
Creatinine-d3

http://www.lumiprobe.com/p/creatinine-d3

Creatinine is synthesized in the liver, kidneys, and pancreas, transported to muscle and brain tissue, where it is phosphorylated to phosphocreatine, while free creatine in muscle undergoes non-enzymatic conversion to creatinine. Creatinine levels in blood and urine serve as a key marker for estimating glomerular filtration rate. A persistent increase in blood creatinine indicates the development of renal impairment. Creatinine concentration is also used in screening for chronic conditions such as diabetes mellitus, hypertension, and heart failure. Urinary creatinine measurement is essential for clearance calculations and for diagnosing tubular disorders, particularly Fanconi syndrome.

Because creatinine-d3 is chemically identical to its unlabeled counterpart, it exhibits identical behavior during extraction, chromatography, and ionization. This makes it an optimal internal standard for pharmacokinetic, biochemical, and *in vitro* clinical laboratory assays.

It is used as an internal standard for the quantitative determination of creatinine by LC-MS/MS.



Structure of Creatinine-d3

General properties

Appearance:	white powder
Molecular weight:	116.14
CAS number:	143827-20-7
Molecular formula:	$C_4H_4D_3N_3O$
Quality control:	NMR ^1H and HPLC-MS (95+ %, D: 98+ %)
Storage conditions:	24 months after receival at -20°C in the dark. Transportation: at room temperature for up to 3 weeks. Desiccate.
Legal statement:	This Product is offered and sold for research purposes only. It has not been tested for safety and efficacy in food, drug, medical device, cosmetic, commercial or any other use. Supply does not express or imply authorization to use for any other purpose, including, without limitation, in vitro diagnostic purposes, in the manufacture of food or pharmaceutical products, in medical devices or in cosmetic products.