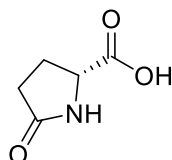


## D-Pyroglutamic acid

Code No.: **BIA-P2215**

Pack sizes: **1 mg, 5 mg**



Synonyms : 5-Oxo-D-proline, (2R)-5-Oxopyrrolidine-2-carboxylic acid

### Specifications

CAS #	: 4042-36-8
Molecular Formula	: C <sub>5</sub> H <sub>7</sub> NO <sub>3</sub>
Molecular Weight	: 129.1
Source	: Synthetic
Appearance	: White solid
Purity	: >95% by HPLC
Long Term Storage	: -20°C
Solubility	: Soluble in methanol or DMSO

### Application Notes

D-Pyroglutamic acid (5-oxo-D-proline, (R)-5-oxopyrrolidine-2-carboxylic acid) is a naturally occurring  $\gamma$ -lactam also formed by the thermal head-to-tail cyclisation of D-glutamic acid. Increased serum levels of D-pyroglutamic acid are associated with nascent metabolic syndrome and renal failure. D-Pyroglutamic acid has been used as a synthon but its pharmacological profile has attracted little interest.

### References

1. Accumulation of 5-oxo-L-proline and 5-oxo-D-proline in the blood plasma in end stage renal disease. Palekar A.G. et al. Biochem Med. 1975, 14, 339.
2. D-Glutamate is metabolized in the heart mitochondria. Ayoshi M. et al. Sci Rep. 2017, 7, 43911.
3. Exploratory metabolomics of nascent metabolic syndrome. Shim K. et al. J Diab Compl. 2019, 33, 212.