

# PRODUCT INFORMATION

## Oxonic Acid-<sup>13</sup>C<sub>2</sub>,<sup>15</sup>N<sub>3</sub> (potassium salt hydrate)

Item No. 33282

**Formal Name:** 1,4,5,6-tetrahydro-4,6-dioxo-1,3,5-triazine-4,6-<sup>13</sup>C<sub>2</sub>-1,3,5-<sup>15</sup>N<sub>3</sub>-2-carboxylic acid, monopotassium salt, hydrate

**Synonyms:** Allantoxanic Acid-<sup>13</sup>C<sub>2</sub>,<sup>15</sup>N<sub>3</sub>, Potassium oxonate-<sup>13</sup>C<sub>2</sub>,<sup>15</sup>N<sub>3</sub>

**MF:** C<sub>2</sub>[<sup>13</sup>C]<sub>2</sub>H<sub>2</sub>[<sup>15</sup>N]<sub>3</sub>O<sub>4</sub> • K [XH<sub>2</sub>O]

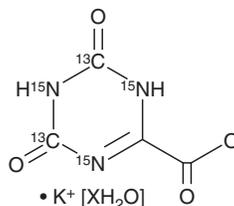
**FW:** 161.0

**Purity:** ≥95%

**Supplied as:** A solid

**Storage:** -20°C

**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Oxonic acid-<sup>13</sup>C<sub>2</sub>,<sup>15</sup>N<sub>3</sub> (potassium salt hydrate) is supplied as a solid. Oxonic acid-<sup>13</sup>C<sub>2</sub>,<sup>15</sup>N<sub>3</sub> (potassium salt hydrate) is slightly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

### Description

Oxonic acid-<sup>13</sup>C<sub>2</sub>,<sup>15</sup>N<sub>3</sub> is intended for use as an internal standard for the quantification of oxonic acid (potassium salt) (Item No. 22586) by GC- or LC-MS. Oxonic acid is a uricase inhibitor (IC<sub>50</sub> = 0.8 μM) that prevents metabolism and excretion of uric acid.<sup>1,2</sup> It also inhibits orotate phosphoribosyltransferase (ORPT), reducing OPRT-mediated phosphorylation of 5-fluorouracil (5-FU; Item No. 14416) in Yoshida sarcoma cell extracts with an IC<sub>50</sub> value of 3.7 μM.<sup>3</sup> Oxonic acid (10-50 mg/kg) decreases the severity of gastrointestinal tract injury and the incidence of diarrhea induced by the 5-FU prodrug tegafur (Item No. 26076) and uracil (Item No. 26088) without loss of antitumor activity in a rat Yoshida sarcoma model. It has also been used to induce hyperuricemia in rodents.<sup>4</sup> Formulations containing oxonic acid have been used in the treatment of head, neck, lung, pancreatic, gastric, and breast carcinomas.

### References

1. Johnson, W.J. and Chartrand, A. Allantoxanamide: A potent new uricase inhibitor *in vivo*. *Life Sci.* **23(22)**, 2239-2244 (1978).
2. Gralla, E.J. and Crelin, E.S. Oxonic acid and fetal development: I. Embryotoxicity in mice. *Toxicology* **6(3)**, 289-297 (1976).
3. Shirasaka, T., Shimamoto, Y., and Fukushima, M. Inhibition by oxonic acid of gastrointestinal toxicity of 5-fluorouracil without loss of its antitumor activity in rats. *Cancer Res.* **53(17)**, 4004-4009 (1993).
2. Stavric, B. and Nera, E.A. Use of the uricase-inhibited rat as an animal model in toxicology. *Clin. Toxicol.* **13(1)**, 47-74 (1978).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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