

## CERTIFICATE OF ANALYSIS

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| <b>PRODUCT:</b>                | <b>Vincristine Sulfate</b><br>[VCR . sulfate; Leukocristine . sulfate]<br>C <sub>46</sub> H <sub>56</sub> N <sub>4</sub> O <sub>10</sub> • H <sub>2</sub> SO <sub>4</sub> , M.W. 923.1, CAS# [2068-78-2]<br>MI:14: 9986, RTECS: OH6340000  |
| <b>PRODUCT NUMBER:</b>         | V-1055   |
| <b>LOT NUMBER:</b>             | G1302  |
| <b>APPEARANCE:</b>             | White to off-white powder  |
| <b>PURITY:</b>                 | > 98%  |
| <b>SOLUBILITY:</b>             | Soluble in water (80 mg/ml).   |
| <b>PRODUCT DESCRIPTION:</b>    | Microtubule inhibitor. Plant alkaloid that arrests the cell cycle in G2/M phase by blocking mitotic spindle formation. Depolymerizes microtubules and blocks binding of tubulin to microtubule proteins. Causes aberrant tubulin polymerization. Induces apoptosis. Triggers Raf-1 activation, phosphorylation of Bcl-2 family proteins and induction of p53 expression. Cancer chemotherapeutic agent. Posttranscriptionally downregulates HIF-1 $\alpha$ expression. |
| <b>STORAGE &amp; HANDLING:</b> | Store desiccated at -20°C.<br><b>PROTECT FROM LIGHT &amp; MOISTURE!</b><br><b><u>WARNING:</u> TOXIC! MAY BE TERATOGENIC!</b><br>CAUTION: For research use only. Not for human or drug use. The pharmacological and toxicological properties of this product have not been fully investigated. Use caution when handling. Do not use this compound if you are not fully trained or are unaware of the hazards involved.   |

Verified: LA