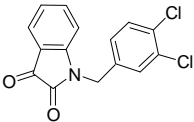




## Certificate of Analysis

| <b>Axon Catalogue ID:</b>           | 2006  | <b>Batch Number:</b> | 1                  |                 |         |       |  |  |            |                |  |  |            |               |  |  |            |      |      |         |         |      |  |  |            |  |  |
|-------------------------------------|---|----------------------|--------------------|-----------------|---------|-------|--|--|------------|----------------|--|--|------------|---------------|--|--|------------|------|------|---------|---------|------|--|--|------------|--|--|
| <b>Product Name:</b>                | Apoptosis Activator 2   |                      |                    |                 |         |       |  |  |            |                |  |  |            |               |  |  |            |      |      |         |         |      |  |  |            |  |  |
| <b>Alternative Name(s):</b>         | N.A.  |                      |                    |                 |         |       |  |  |            |                |  |  |            |               |  |  |            |      |      |         |         |      |  |  |            |  |  |
| <b>IUPAC Name:</b>                  | 1-(3,4-dichlorobenzyl)indoline-2,3-dione  |                      |                    |                 |         |       |  |  |            |                |  |  |            |               |  |  |            |      |      |         |         |      |  |  |            |  |  |
| <b>Structure:</b>                   |    | <b>Amount:</b>       |                    |                 |         |       |  |  |            |                |  |  |            |               |  |  |            |      |      |         |         |      |  |  |            |  |  |
| <b>CAS number:</b>                  | 79183-19-0  | <b>MW:</b>           | 306.14             |                 |         |       |  |  |            |                |  |  |            |               |  |  |            |      |      |         |         |      |  |  |            |  |  |
| <b>Batch Molecular Formula:</b>     | C <sub>15</sub> H <sub>9</sub> Cl <sub>2</sub> N <sub>2</sub> O <sub>2</sub>  | <b>Batch MW:</b>     | 306.14             |                 |         |       |  |  |            |                |  |  |            |               |  |  |            |      |      |         |         |      |  |  |            |  |  |
| <b>Appearance:</b>                  | Orange solid  | <b>Observed mp:</b>  | 184.9 - 186.5 °C   |                 |         |       |  |  |            |                |  |  |            |               |  |  |            |      |      |         |         |      |  |  |            |  |  |
| <b>TLC (R<sub>f</sub>):</b>         | 0.4 EtOAc/Hex (1:2)   |                      |                    |                 |         |       |  |  |            |                |  |  |            |               |  |  |            |      |      |         |         |      |  |  |            |  |  |
| <b>Chemical Purity:</b>             | 99.7%   |                      |                    |                 |         |       |  |  |            |                |  |  |            |               |  |  |            |      |      |         |         |      |  |  |            |  |  |
| <b>Optical Purity (ee):</b>         |   |                      |                    |                 |         |       |  |  |            |                |  |  |            |               |  |  |            |      |      |         |         |      |  |  |            |  |  |
| <b><sup>1</sup>H-NMR (300 MHz):</b> | Analytical data confirm chemical structure  |                      |                    |                 |         |       |  |  |            |                |  |  |            |               |  |  |            |      |      |         |         |      |  |  |            |  |  |
| <b>Mass Spec:</b>                   | Analytical data confirm chemical structure  |                      |                    |                 |         |       |  |  |            |                |  |  |            |               |  |  |            |      |      |         |         |      |  |  |            |  |  |
| <b>Microanalysis:</b>               | C, H, and N fit within 0,4% of theoretical calculation  |                      |                    |                 |         |       |  |  |            |                |  |  |            |               |  |  |            |      |      |         |         |      |  |  |            |  |  |
| <b>Storage Conditions:</b>          | Store at  | +4°C                 |                    |                 |         |       |  |  |            |                |  |  |            |               |  |  |            |      |      |         |         |      |  |  |            |  |  |
| <b>Solubility Data:</b>             | <table><thead><tr><th>Solvent</th><th>Solubility (mg/ml)</th><th>Solubility (mM)</th><th>Remarks</th></tr></thead><tbody><tr><td>Water</td><td></td><td></td><td>Not Tested</td></tr><tr><td>0.1N NaOH (aq)</td><td></td><td></td><td>Not Tested</td></tr><tr><td>0.1N HCl (aq)</td><td></td><td></td><td>Not Tested</td></tr><tr><td>DMSO</td><td>30.6</td><td>&gt;100 mM</td><td>Soluble</td></tr><tr><td>EtOH</td><td></td><td></td><td>Not Tested</td></tr></tbody></table> | Solvent              | Solubility (mg/ml) | Solubility (mM) | Remarks | Water |  |  | Not Tested | 0.1N NaOH (aq) |  |  | Not Tested | 0.1N HCl (aq) |  |  | Not Tested | DMSO | 30.6 | >100 mM | Soluble | EtOH |  |  | Not Tested |  |  |
| Solvent                             | Solubility (mg/ml)  | Solubility (mM)      | Remarks            |                 |         |       |  |  |            |                |  |  |            |               |  |  |            |      |      |         |         |      |  |  |            |  |  |
| Water                               |   |                      | Not Tested         |                 |         |       |  |  |            |                |  |  |            |               |  |  |            |      |      |         |         |      |  |  |            |  |  |
| 0.1N NaOH (aq)                      |   |                      | Not Tested         |                 |         |       |  |  |            |                |  |  |            |               |  |  |            |      |      |         |         |      |  |  |            |  |  |
| 0.1N HCl (aq)                       |   |                      | Not Tested         |                 |         |       |  |  |            |                |  |  |            |               |  |  |            |      |      |         |         |      |  |  |            |  |  |
| DMSO                                | 30.6  | >100 mM              | Soluble            |                 |         |       |  |  |            |                |  |  |            |               |  |  |            |      |      |         |         |      |  |  |            |  |  |
| EtOH                                |   |                      | Not Tested         |                 |         |       |  |  |            |                |  |  |            |               |  |  |            |      |      |         |         |      |  |  |            |  |  |
| <b>Remarks:</b>                     |   |                      |                    |                 |         |       |  |  |            |                |  |  |            |               |  |  |            |      |      |         |         |      |  |  |            |  |  |
| <b>QC Date:</b>                     | 2/21/2013   |                      |                    |                 |         |       |  |  |            |                |  |  |            |               |  |  |            |      |      |         |         |      |  |  |            |  |  |

The purity of Axon products is confirmed by HPLC, MS, NMR and/or microanalysis. Analytical data are available upon request. Request can be submitted by e-mail to [info@axonmedchem.com](mailto:info@axonmedchem.com) indicating Axon Catalogue ID and Batch number.

**Caution: Not fully tested. For research purposes only**