

# Geldanamycin

## Product Specifications

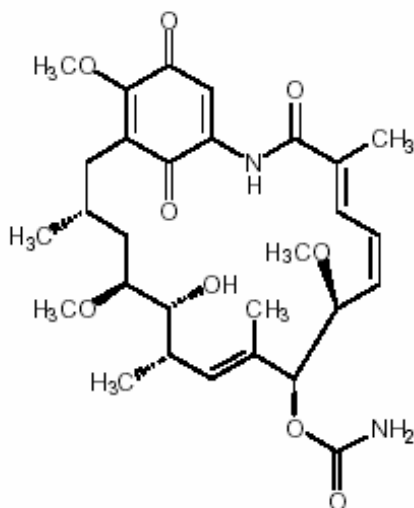
|                             |  |         |                  |           |  |         |                                  |          |  |         |                           |         |                      |         |                            |         |                                     |
|-----------------------------|--|---------|------------------|-----------|--|---------|----------------------------------|----------|--|---------|---------------------------|---------|----------------------|---------|----------------------------|---------|-------------------------------------|
| <b>Catalog Number:</b>      | HPK-102  |         |                  |           |  |         |                                  |          |  |         |                           |         |                      |         |                            |         |                                     |
| <b>Source:</b>              | <i>Streptomyces hygroscopicus</i>  |         |                  |           |  |         |                                  |          |  |         |                           |         |                      |         |                            |         |                                     |
| <b>Application Notes:</b>   | Not sterile<br><i>The optimal dilution for a specific application must be determined by the investigator</i>   |         |                  |           |  |         |                                  |          |  |         |                           |         |                      |         |                            |         |                                     |
| <b>Molecular Weight:</b>    | 560.6  |         |                  |           |  |         |                                  |          |  |         |                           |         |                      |         |                            |         |                                     |
| <b>Purity:</b>              | >95% as determined by HPLC   |         |                  |           |  |         |                                  |          |  |         |                           |         |                      |         |                            |         |                                     |
| <b>Molecular Formula:</b>   | C <sub>29</sub> H <sub>40</sub> N <sub>2</sub> O <sub>9</sub>  |         |                  |           |  |         |                                  |          |  |         |                           |         |                      |         |                            |         |                                     |
| <b>Physical Appearance:</b> | Yellow solid   |         |                  |           |  |         |                                  |          |  |         |                           |         |                      |         |                            |         |                                     |
| <b>Storage:</b>             | Store at -20°C<br><i>Shipping conditions may differ from the recommended storage temperature</i>   |         |                  |           |  |         |                                  |          |  |         |                           |         |                      |         |                            |         |                                     |
| <b>Related Products:</b>    | <table border="0"> <tr> <td>EKS-895</td> <td>Hsp90α ELISA Kit</td> </tr> <tr> <td>SPA-830PE</td> <td>Hsp90 Monoclonal Antibody (AC88), PE Conjugate</td> </tr> <tr> <td>SPA-835</td> <td>Hsp90 Monoclonal Antibody (16F1)</td> </tr> <tr> <td>SPA-835B</td> <td>Hsp90 Monoclonal Antibody (16F1), Biotin Conjugate</td> </tr> <tr> <td>SPA-846</td> <td>Hsp90 Polyclonal Antibody</td> </tr> <tr> <td>SPP-770</td> <td>Hsp90 Native Protein</td> </tr> <tr> <td>SPP-776</td> <td>Hsp90α Recombinant Protein</td> </tr> <tr> <td>OSA-602</td> <td>HIF-1α Monoclonal Antibody (Ha111α)</td> </tr> </table> | EKS-895 | Hsp90α ELISA Kit | SPA-830PE | Hsp90 Monoclonal Antibody (AC88), PE Conjugate | SPA-835 | Hsp90 Monoclonal Antibody (16F1) | SPA-835B | Hsp90 Monoclonal Antibody (16F1), Biotin Conjugate | SPA-846 | Hsp90 Polyclonal Antibody | SPP-770 | Hsp90 Native Protein | SPP-776 | Hsp90α Recombinant Protein | OSA-602 | HIF-1α Monoclonal Antibody (Ha111α) |
| EKS-895                     | Hsp90α ELISA Kit   |         |                  |           |  |         |                                  |          |  |         |                           |         |                      |         |                            |         |                                     |
| SPA-830PE                   | Hsp90 Monoclonal Antibody (AC88), PE Conjugate   |         |                  |           |  |         |                                  |          |  |         |                           |         |                      |         |                            |         |                                     |
| SPA-835                     | Hsp90 Monoclonal Antibody (16F1)   |         |                  |           |  |         |                                  |          |  |         |                           |         |                      |         |                            |         |                                     |
| SPA-835B                    | Hsp90 Monoclonal Antibody (16F1), Biotin Conjugate   |         |                  |           |  |         |                                  |          |  |         |                           |         |                      |         |                            |         |                                     |
| SPA-846                     | Hsp90 Polyclonal Antibody  |         |                  |           |  |         |                                  |          |  |         |                           |         |                      |         |                            |         |                                     |
| SPP-770                     | Hsp90 Native Protein   |         |                  |           |  |         |                                  |          |  |         |                           |         |                      |         |                            |         |                                     |
| SPP-776                     | Hsp90α Recombinant Protein   |         |                  |           |  |         |                                  |          |  |         |                           |         |                      |         |                            |         |                                     |
| OSA-602                     | HIF-1α Monoclonal Antibody (Ha111α)  |         |                  |           |  |         |                                  |          |  |         |                           |         |                      |         |                            |         |                                     |

## Background:

Geldanamycin, a benzoquinoid ansamycin produced by *Streptomyces hygroscopicus*, binds specifically to heat shock protein 90 (Hsp90) and downregulates such target proteins as tyrosine kinases, steroid receptors, transcription factors and cell cycle regulatory kinases<sup>1,2</sup>. Geldanamycin induces the inactivation, destabilization and eventual degradation of HIF-1α<sup>3</sup>. Geldanamycin also represents a potent inhibitor of p60src tyrosine kinase and of *c-myc* gene expression in murine lymphoblastoma cells. Geldanamycin binds to Hsp90 and disrupts Raf-1-Hsp90 complex, leading to destabilization of Raf-1<sup>4-7</sup>.

### References:

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- Neckers, L., (2002) Trends Mol Med. **8**, S55.
- Mabjeesh, N.J., *et al.* (2002) Cancer Res. **62**, 2478.
- Mimnaugh, E.G., *et al.* (1996) J Biol Chem. **271**, 22796.
- Schulte, T.W., *et al.* (1996) Mol.Cell.Biol. **16**, 5839.
- Blagosklonny, M.V., *et al.* (1995) Oncogene **11**, 933.
- Schnur, R.C., *et al.* (1995) J Med Chem. **38**, 3806.



Structure