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#2222 Store at -20C

## Anisomycin

10 mg

For Research Use Only. Not for Use in Diagnostic Procedures.

### Background

Anisomycin, an antibiotic produced by *Streptomyces griseolus* and *S. roseochromogenes*, was originally described to inhibit protein-protein synthesis at the translational level (1). More recently, it has been well characterized to strongly activate the stress kinases SAPK/JNK and p38 MAPK, as well as p70/85 S6 kinase in mammalian cells, which results in the rapid induction of immediate-early (IE) genes, such as c-fos, fosB, c-jun, JunB, and JunD (1). Investigators have demonstrated that anisomycin acts as a potent signaling agonist, synergizing with growth factors and phorbol esters to superinduce these IE genes (1,2). Research studies have demonstrated that anisomycin induces apoptosis in many cancer cell lines (3-5).

### Molecular Formula

C<sub>14</sub>H<sub>19</sub>NO<sub>4</sub>

### Molecular Weight

265.3 g/mol

### Purity

>98%

### CAS

22862-76-6

### Solubility

Soluble in DMSO at 100mg/ml and MeOH at 50mg/ml.

### Storage

Store lyophilized at -20C. Protect from light. In lyophilized form, the chemical is stable for 24 months. Once in solution, use within 1 month and store at -20C. Aliquot to avoid multiple freeze/thaw cycles.

### Directions for Use

Anisomycin is supplied as a lyophilized powder. For a 25 mg/ml stock, reconstitute the 10 mg in 400 µl DMSO. Working concentrations and length of treatments vary depending on the desired effect, but it is typically used at 5-50 µg/ml for 5-60 minutes. Soluble in DMSO or MeOH.

### Background References

1. Hazzalin, C.A. et al. (1998) *Mol Cell Biol* 18, 1844-54.
2. Kardalidou, E. et al. (1994) *Mol Cell Biol* 14, 1066-74.
3. Kochi, S.K. and Collier, R.J. (1993) *Exp Cell Res* 208, 296-302.
4. Töröcsik, B. and Szeberényi, J. (2000) *Biochem Biophys Res Commun* 278, 550-6.
5. Curtin, J.F. and Cotter, T.G. (2002) *Br J Cancer* 87, 1188-94.

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