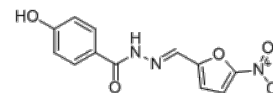


**Product Name** : Nifuroxazide  
**Cat. No.** : PC-49691  
**CAS No.** : 965-52-6  
**Molecular Formula** : C<sub>12</sub>H<sub>9</sub>N<sub>3</sub>O<sub>5</sub>  
**Molecular Weight** : 275.22  
**Target** : Bacterial  
**Solubility** : 10 mM in DMSO



### Biological Activity

Nifuroxazide (NFX) is a broad-spectrum antibacterial agent, also exhibits potent inhibition of the transcription factor **STAT3**, also inhibits ERG-mediated transcription, is selectively bio-activated by **ALDH1** enzymes over ALDH2 enzymes. Nifuroxazide inhibited the proliferation of a TMPRSS2:ERG fusion-positive prostate cancer cell line (VCaP) with an IC<sub>50</sub> lower than that of ERG-negative prostate cancer cell lines (LNCaP, DU145 and WPMY cells). Nifuroxazide blocked PARP1 interaction with ERG, which is required for ERG-mediated transcription. Nifuroxazide inhibited survival of multiple myeloma cells by directly inhibiting STAT3, inhibited STAT3-dependent luciferase activity with EC<sub>50</sub> of 3 uM. Nifuroxazide selectively eradicates ALDH1High melanoma tumor-initiating cells.

### References

- Li C, et al. *Mol Cancer Ther.* 2023 Jan 9:MCT-22-0159.  
Ye TH, et al. *Cell Death Dis.* 2017 Jan 5;8(1):e2534.  
Nelson EA, et al. *Blood.* 2008 Dec 15;112(13):5095-102.

**Caution: Product has not been fully validated for medical applications. Lab Use Only!**

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