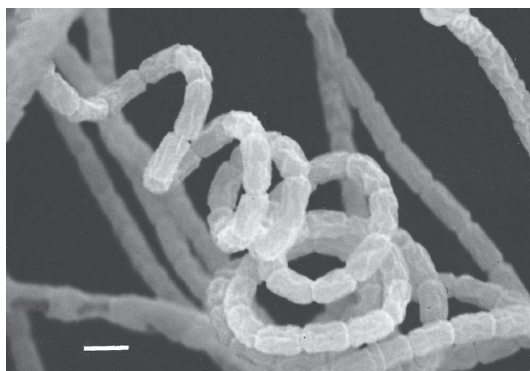


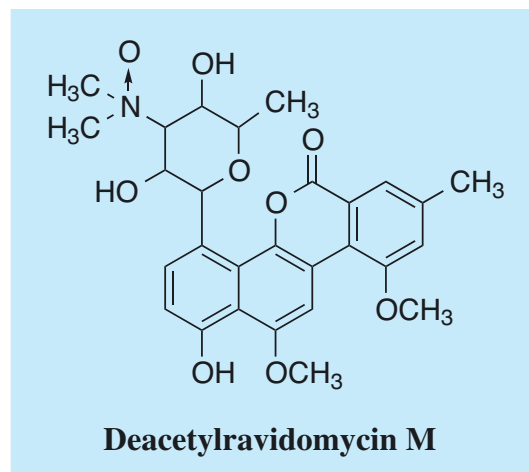
Deacetylravidomycin M

1. Discovery, producing organism and structure¹⁻²⁾

Deacetylravidomycin M was isolated from the culture broth of the actinomycete strain WK-6326 and found to be an inhibitor of IL-4 signal transduction. Recently, the structure of deacetylravidomycin M was revised as shown below by total synthesis of Suzuki's group.⁴⁾



Streptomyces sp. WK-6326



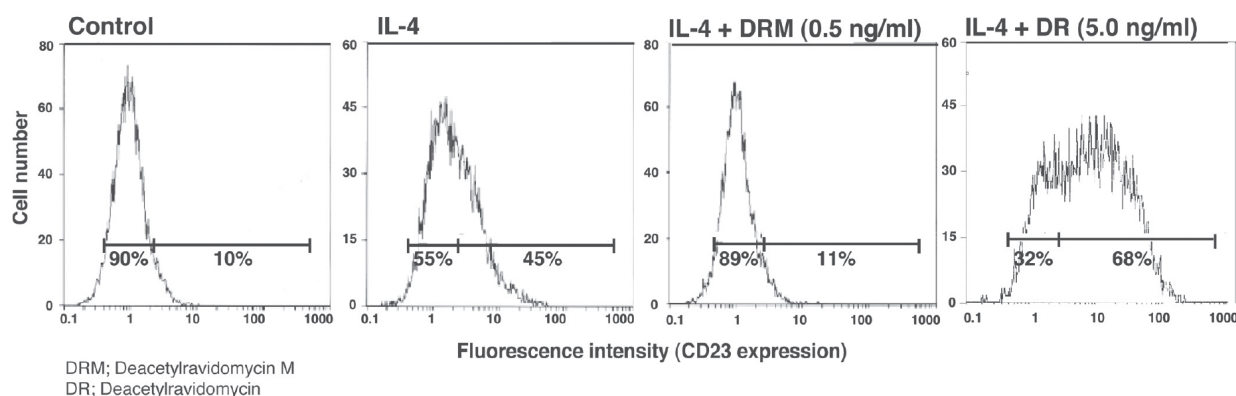
2. Physical data (Deacetylravidomycin M)²⁾

Pale Yellow Powder. $C_{28}H_{31}NO_8$; mol wt 509.2. Sol. in MeOH, $CHCl_3$, CH_3CN , acetone, EtOH, EtOAc. Insol. in H_2O , hexane.

3. Biological activity¹⁾

1) Effect of deacetylravidomycins on IL-4-induced CD23 expression in U937 cells.

Deacetylravidomycin M inhibited IL-4-induced CD23 expression in U937 cells without any cytotoxic effects, whereas deacetylravidomycin³⁾ showed no inhibitory activity.



2) Antimicrobial activities of deacetylravidomycins

Deacetylravidomycin M inhibited growth of *Bacillus subtilis* and *Micrococcus luteus* moderately, but showed almost no antimicrobial activity against other organisms. Deacetylravidomycin showed antimicrobial activity against Gram-positive bacteria.

Antimicrobial activities of deacetylravidomycins

Test organism	MIC ($\mu\text{g/ml}$)	
	Deacetylravidomycin M	Deacetylravidomycin
<i>Bacillus subtilis</i> KB27 (ATCC6633)	25	3.0
<i>Staphylococcus aureus</i> KB210 (ATCC6538p)	125	5.0
<i>Micrococcus luteus</i> KB40 (ATCC9431)	25	3.0
<i>Mycobacterium smegmatis</i> KB42 (ATCC607)	125	3.0
<i>Escherichia coli</i> KB176 (IFO12734)	>125	>125
<i>Pseudomonas aeruginosa</i> KB105 (IFO3080)	>125	>125
<i>Xanthomonas campestris</i> KB88	125	25
<i>Acholeplasma laidlawii</i> KB174	>125	>125
<i>Pyricularia oryzae</i> KB180	>125	25
<i>Aspergillus niger</i> KF103 (ATCC6275)	>125	>125
<i>Mucor racemosus</i> KF223 (IFO4581)	>125	>125
<i>Candida albicans</i> KF1	>125	>125
<i>Saccharomyces cerevisiae</i> KF26 (ATCC9763)	>125	>125

4. References

1. [781] M. Arai *et al.*, *J. Antibiot.* **54**, 554-561 (2001)
2. [782] M. Arai *et al.*, *J. Antibiot.* **54**, 562-566 (2001)
3. T. Narita *et al.*, *J. Antibiot.* **42**, 347-356 (1989)
4. A. Ben *et al.*, *Tetrahedron* **67**, 6460-6468 (2011)