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IFNλR1 is present in human dermal fibroblasts
a) Relative mRNA expression

b) Relative mRNA expression

**c) Protein band intensity**

**d) Protein band intensity**
IFNλ1 Induces the expression of MxA but not other ISGs in dermal fibroblasts
Figure 2

(a) MxA Fibroblasts 4 h

(b) MxA Fibroblasts 24 h

(c) GBP-1 Fibroblasts 4 h

(d) GBP-1 Fibroblasts 24 h

Relative mRNA expression

Untreated | IFNα | IFNλ₁

Untreated | IFNα | IFNλ₁

Untreated | IFNα | IFNλ₁

Untreated | IFNα | IFNλ₁

** | ** | **

* | *** | ***

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Figure 2
Figure 2
IFNλ1 induces the phosphorylation of p38 MAP kinase but not STAT1 (Tyr701) in dermal fibroblasts
Human dermal fibroblasts

<table>
<thead>
<tr>
<th>Time/mins</th>
<th>10</th>
<th>30</th>
<th>60</th>
</tr>
</thead>
<tbody>
<tr>
<td>UT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IFNα</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IFNλ1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **pSTAT1**
- **STAT1**
- **p-P38**
- **P38**
- **pERK**
- **ERK**
- **GAPDH**
**Human primary keratinocytes**

![Image of a diagram showing protein expression over time with various treatments.](image)

**Figure 3b**
Inhibition of p38 phosphorylation abrogated IFNλ1-induced MxA protein production by dermal fibroblasts
Figure 4
Human primary keratinocytes

<table>
<thead>
<tr>
<th></th>
<th>MxA</th>
<th>GAPDH</th>
</tr>
</thead>
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<td>DMSO</td>
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<td><img src="image2.png" alt="Image" /></td>
</tr>
<tr>
<td>SB</td>
<td>+ - - - + - + - +</td>
<td></td>
</tr>
<tr>
<td>U</td>
<td>- + - - + - + + +</td>
<td></td>
</tr>
<tr>
<td>IFNα</td>
<td>- - - + + + - - -</td>
<td></td>
</tr>
<tr>
<td>IFNλ1</td>
<td>- - - - - + + + +</td>
<td></td>
</tr>
</tbody>
</table>

Figure 4
IFNλ1 synergise with TGFβ1 to enhance collagen mRNA in dermal fibroblasts
Figure 5
Primary keratinocytes

Figure 6

0 h

72 h
Figure 6
Dermal fibroblasts

0 h

72 h
Dermal fibroblasts

**Figure 6**

![Graph showing fibroblast proliferation](image)
Supplementary figures
Figure S1

Amplification

RFU

U6
IFN6R1
NS

Cycles

Melt Peak

-d(RFU)/dT

U6
IFN6R1

Temperature, Celsius
Figure S2

- **Part a**: OAS2 Fibroblasts 4 h
  - Untreated
  - IFN α
  - IFN λ1

- **Part b**: OAS2 Fibroblasts 24 h
  - Untreated
  - IFN α
  - IFN λ1

- **Part c**: OAS2 Keratinocytes 6 h
  - Untreated
  - IFN α
  - IFN λ1

- **Part d**: OAS2 Keratinocytes 24 h
  - Untreated
  - IFN α
  - IFN λ1
Figure S3

The graph shows the relative mRNA expression (AU) for different treatments: 10ng/mL IFN, 100ng/mL IFN, 200ng/mL IFN, and Untreated. The x-axis represents the different treatments, while the y-axis shows the relative mRNA expression. The graph includes error bars and asterisks to indicate statistical significance.
Figure S4
Figure S5

- IFNλ1
- IFNα

Graph showing % Scratch Area over time (0 hr, 24 hrs, 48 hrs) for untreated, IFNλ1, and IFNα treatments.
Proposed IFNα and IFNλ signalling in fibroblasts

- IFNα
  - STAT1
  - MAPKs (P38, ERK)
  - MxA and other ISGs
- IFNλ1
  - MAPKs (P38, ERK)
  - MxA
  - No MxA

No phosphorylation

Figure S6
Col1A1 24 h

Relative mRNA expression

- Untreated
- DMSO
- SB
- U
- TGFβ1
- SB+TGFβ1
- U+TGFβ1