

# Homoserine Lactones

N-acyl homoserine lactones (AHLs) are a class of small signal molecules called autoinducers which coordinate gene expression based on cell density in gram-negative bacteria. This system is called quorum sensing. AHLs consist of a fatty acid coupled to a homoserine lactone (HSL). The molecules differ in functional group substitution (hydrogen, hydroxy or oxo group) at the third carbon of the chain (C3) and in chain length (typically C4 – C18) giving signal specificity.

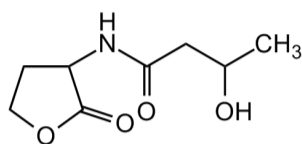
## 3-Hydroxy-butanoyl-DL-homoserine lactone H0076

3-Hydroxy-C4-HSL| N-(3-Hydroxybutanoyl)-L-homoserine lactone

**Specs:** min.98% (HPLC) | 1H-NMR | White powder  
**CAS:** 912545-51-8 **MF:** C8H13NO4 **MW:** 187.19

<http://www.chemodex.com/products/H0076>  
5 mg | 10 mg |

3-Hydroxy-butanoyl-DL-homoserine lactone is a small diffusible signaling molecule and is a member of N-acyl-homoserine lactone family. N-acylhomoserine lactones (AHL) are involved in quorum sensing, controlling gene expression, and cellular metabolism. The diverse applications of this kind of molecule include regulation of virulence in general, infection prevention, and formation of biofilms.



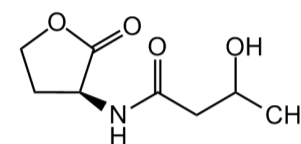
## 3-Hydroxy-butanoyl-L-homoserine lactone H0084

3OH-C4-HSL S/RS| 3-Hydroxy-C4-HSL| N-(3-Hydroxybutanoyl)-L-homoserine

**Specs:** min.96% (HPLC) | 1H-NMR | White powder  
**CAS:** 1325550-06-8 **MF:** C8H13NO4 **MW:** 187.19

<http://www.chemodex.com/products/H0084>  
5 mg | 25 mg |

3-Hydroxy-butanoyl-L-homoserine lactone is a small diffusible signaling molecule and is a member of N-acyl-homoserine lactone family. N-acylhomoserine lactones (AHL) are involved in quorum sensing, controlling gene expression, and cellular metabolism. The diverse applications of this kind of molecule include regulation of virulence in general, infection prevention, and formation of biofilms.



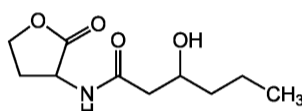
## 3-Hydroxy-hexanoyl-DL-homoserine lactone H0082

3OH-C6-HSL RS/RS

**Specs:** min.98% (NMR) | 1H-NMR | White to pink sticky powder  
**CAS:** 161234-45-3 **MF:** C10H17NO4 **MW:** 215.25

<http://www.chemodex.com/products/H0082>  
5 mg | 25 mg |

3-Hydroxy-hexanoyl-DL-homoserine lactone is a small diffusible signaling molecule and is a member of N-acyl-homoserine lactone family. N-acylhomoserine lactones (AHL) are involved in quorum sensing, controlling gene expression, and cellular metabolism. The diverse applications of this kind of molecule include regulation of virulence in general, infection prevention, and formation of biofilms.



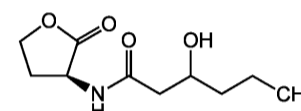
## 3-Hydroxy-hexanoyl-L-homoserine lactone H0083

3OH-C6-HSL S/RS

**Specs:** min.98% (NMR) | 1H-NMR | White to pink powder  
**CAS:** 192883-16-2 **MF:** C10H17NO4 **MW:** 215.25

<http://www.chemodex.com/products/H0083>  
5 mg | 25 mg |

3-Hydroxy-hexanoyl-L-homoserine lactone is a small diffusible signaling molecule and is a member of N-acyl-homoserine lactone family. N-acylhomoserine lactones (AHL) are involved in quorum sensing, controlling gene expression, and cellular metabolism. The diverse applications of this kind of molecule include regulation of virulence in general, infection prevention, and formation of biofilms.



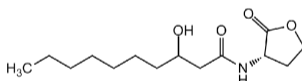
## N-(3-Hydroxydecanoyl)-DL-homoserine lactone H0079

3-Hydroxy-N-(tetrahydro-2-oxo-3-furanyl)-decanamide

**Specs:** min.99% (HPLC) | 1H-NMR | White to off-white powder  
**CAS:** 929222-14-0 **MF:** C14H25NO4 **MW:** 271.35

<http://www.chemodex.com/products/H0079>  
25 mg | 250 mg |

Quorum sensing agent.



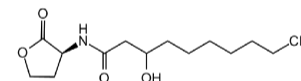
## N-(3-Hydroxydecanoyl)-L-homoserine lactone H0086

OH-C10-HSL| 3-Hydroxy-N-[(3S)-tetrahydro-2-oxo-3-furanyl]-decanamide

**Specs:** min.97% (NMR) | 1H-NMR | White to off-white powder  
**CAS:** 192883-12-8 **MF:** C14H25NO4 **MW:** 271.35

<http://www.chemodex.com/products/H0086>  
5 mg | 25 mg |

N-3-hydroxydecanoyl-L-homoserine lactone is a small diffusible signaling molecule secreted by various bacteria and involved in quorum sensing, thereby controlling gene expression and affecting cellular metabolism. This lactone is produced via lactonolysis from 3-oxodecanoyl-homoserine lactone, altering quorum sensing or contributing to quorum quenching. The applications of this molecule include regulation of virulence and exoproteases.



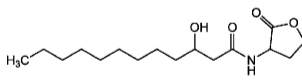
## N-(3-Hydroxydodecanoyl)-DL-homoserine lactone H0081

3-Hydroxy-N-(tetrahydro-2-oxo-3-furanyl)dodecanamide

**Specs:** min.97% (HPLC) | 1H-NMR | Solid  
**CAS:** 182359-60-0 **MF:** C16H29NO4 **MW:** 299.41

<http://www.chemodex.com/products/H0081>  
25 mg | 250 mg |

Quorum sensing agent.



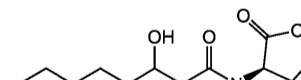
## N-(3-Hydroxyoctanoyl)-DL-homoserine lactone H0078

3-Hydroxy-N-(tetrahydro-2-oxo-3-furanyl)-octanamide

**Specs:** min.99% (HPLC) | 1H-NMR | White to off-white powder  
**CAS:** 853799-77-6 **MF:** C12H21NO4 **MW:** 243.30

<http://www.chemodex.com/products/H0078>  
25 mg | 250 mg |

Quorum sensing agent.



# Homoserine Lactones

N-acyl homoserine lactones (AHLs) are a class of small signal molecules called autoinducers which coordinate gene expression based on cell density in gram-negative bacteria. This system is called quorum sensing. AHLs consist of a fatty acid coupled to a homoserine lactone (HSL). The molecules differ in functional group substitution (hydrogen, hydroxy or oxo group) at the third carbon of the chain (C3) and in chain length (typically C4 – C18) giving signal specificity.

## N-(3-Hydroxyoctanoyl)-L-homoserine lactone H0206

OH-C8-HSL | 3-Hydroxy-N-[(3S)-tetrahydro-2-oxo-3-furanyl]-octanamide

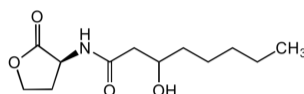
**Specs:** min.98% (HPLC) | 1H-NMR | White to off-white powder

**CAS:** 192883-14-0 **MF:** C<sub>12</sub>H<sub>21</sub>NO<sub>4</sub> **MW:** 243.30

<http://www.chemodex.com/products/H0206>

10 mg | 25 mg |

3-Hydroxy-octanoyl-L-homoserine lactone is a small diffusible signaling molecule and is a member of N-acyl-homoserine lactone family. N-acylhomoserine lactones (AHL) are involved in quorum sensing, controlling gene expression, and cellular metabolism. The diverse applications of this kind of molecule include regulation of virulence in general, infection prevention, and formation of biofilms.



## N-(3-Hydroxytetradecanoyl)-DL-homoserine lac- H0044

3O, C14-DL-HSL

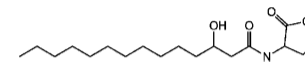
**Specs:** min.96% (HPLC) | 1H-NMR | White to off-white powder

**CAS:** 172670-99-4 **MF:** C<sub>18</sub>H<sub>33</sub>NO<sub>4</sub> **MW:** 327.46

<http://www.chemodex.com/products/H0044>

20 mg | 250 mg |

Quorum sensing agent.



## N-(3-Hydroxytetradecanoyl)-L-homoserine lactone H0088

3OH-C14-HSL | 3-Hydroxy-N-(tetrahydro-2-oxo-3-furanyl)tetradecanamide

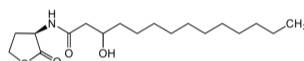
**Specs:** min.96% (HPLC) | 1H-NMR | White to off-white powder

**CAS:** 364749-99-5 **MF:** C<sub>18</sub>H<sub>33</sub>NO<sub>4</sub> **MW:** 327.46

<http://www.chemodex.com/products/H0088>

20 mg | 250 mg |

N-(3-Hydroxytetradecanoyl)-L-homoserine lactone is a small diffusible signaling molecule and is a member of N-acyl-homoserine lactone family. N-acylhomoserine lactones (AHL) are involved in quorum sensing, controlling gene expression, and cellular metabolism. The diverse applications of this kind of molecule include regulation of virulence in general, infection prevention, and formation of biofilms.



## N-(3-Oxobutanoyl)-DL-homoserine lactone O0050

3-oxo-C4-HSL | 3OC4-HSL | 3-oxo-N-(2-oxotetrahydrofuran-3-yl)butanamide

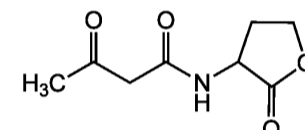
**Specs:** min.97% (GC) | 1H-NMR | White solid

**CAS:** 106983-29-3 **MF:** C<sub>8</sub>H<sub>11</sub>NO<sub>4</sub> **MW:** 185.2

<http://www.chemodex.com/products/O0050>

10 mg | 50 mg |

N-(3-Oxobutanoyl)-DL-homoserine lactone is a small diffusible signaling molecule and is a member of N-acyl-homoserine lactone family. N-acylhomoserine lactones (AHL) are involved in quorum sensing, controlling gene expression, and cellular metabolism. The diverse applications of this kind of molecule include regulation of virulence in general, infection prevention, and formation of biofilms.



## N-(3-Oxobutanoyl)-L-homoserine lactone O0037

3-oxo-C4-HSL | 3-oxo-N-[(3S)-Tetrahydro-2-oxo-3-furanyl]-butanamide

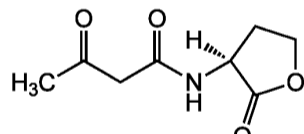
**Specs:** min.97% (GC) | 1H-NMR | White solid

**CAS:** 148433-27-6 **MF:** C<sub>8</sub>H<sub>11</sub>NO<sub>4</sub> **MW:** 185.2

<http://www.chemodex.com/products/O0037>

10 mg | 100 mg |

N-(3-Oxobutanoyl)-L-homoserine lactone is a small diffusible signaling molecule and is a member of N-acyl-homoserine lactone family. N-acylhomoserine lactones (AHL) are involved in quorum sensing, controlling gene expression, and cellular metabolism. The diverse applications of this kind of molecule include regulation of virulence in general, infection prevention, and formation of biofilms.



## N-(3-Oxodecanoyl)-DL-homoserine lactone O0053

3-oxo-C10-HSL | 3OC10-HSL | 3-oxo-N-(Tetrahydro-2-oxo-3-furanyl)-decanamide

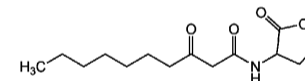
**Specs:** min.97% (GC) | 1H-NMR | White powder

**CAS:** 913697-62-8 **MF:** C<sub>14</sub>H<sub>23</sub>NO<sub>4</sub> **MW:** 269.3

<http://www.chemodex.com/products/O0053>

10 mg | 50 mg |

N-(3-Oxodecanoyl)-DL-homoserine lactone is a small diffusible signaling molecule and is a member of N-acyl-homoserine lactone family. N-acylhomoserine lactones (AHL) are involved in quorum sensing, controlling gene expression, and cellular metabolism. The diverse applications of this kind of molecule include regulation of virulence in general, infection prevention, and formation of biofilms.



## N-(3-Oxodecanoyl)-L-homoserine lactone O0059

3-oxo-C10-HSL | 3OC10-HSL | 3-oxo-N-[(3S)-Tetrahydro-2-oxo-3-furanyl]-

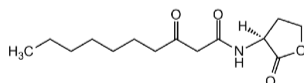
**Specs:** min.97% (HPLC) | 1H-NMR | White solid

**CAS:** 147795-40-2 **MF:** C<sub>14</sub>H<sub>23</sub>NO<sub>4</sub> **MW:** 269.3

<http://www.chemodex.com/products/O0059>

10 mg | 100 mg |

N-(3-Oxodecanoyl)-L-homoserine lactone is a small diffusible signaling molecule and is a member of N-acyl-homoserine lactone family. N-acylhomoserine lactones (AHL) are involved in quorum sensing, controlling gene expression, and cellular metabolism. The diverse applications of this kind of molecule include regulation of virulence in general, infection prevention, and formation of biofilms.



## N-(3-Oxododecanoyl)-L-homoserine lactone O0031

3-Oxo-C12-HSL

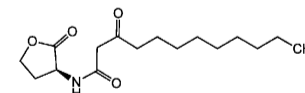
**Specs:** min.98% (NMR) | 1H-NMR | White powder

**CAS:** 168982-69-2 **MF:** C<sub>16</sub>H<sub>27</sub>NO<sub>4</sub> **MW:** 297.39

<http://www.chemodex.com/products/O0031>

10 mg | 20 mg | 100 mg |

Quorum sensing agent.



# Homoserine Lactones

N-acyl homoserine lactones (AHLs) are a class of small signal molecules called autoinducers which coordinate gene expression based on cell density in gram-negative bacteria. This system is called quorum sensing. AHLs consist of a fatty acid coupled to a homoserine lactone (HSL). The molecules differ in functional group substitution (hydrogen, hydroxy or oxo group) at the third carbon of the chain (C3) and in chain length (typically C4 – C18) giving signal specificity.

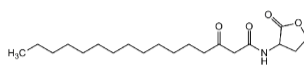
## N-(3-Oxohexadecanoyl)-DL-homoserine lactone O0056

3-oxo-C16-HSL| 3OC16-HSL| 3-oxo-N-(Tetrahydro-2-oxo-3-furanyl)-

**Specs:** min.97% (GC) | 1H-NMR | White solid  
**CAS:** 1071479-82-7 **MF:** C20H35NO4 **MW:** 353.5

<http://www.chemodex.com/products/O0056>  
10 mg | 100 mg |

N-(3-Oxohexadecanoyl)-DL-homoserine lactone is a small diffusible signaling molecule and is a member of N-acyl-homoserine lactone family. N-acylhomoserine lactones (AHL) are involved in quorum sensing, controlling gene expression, and cellular metabolism. The diverse applications of this kind of molecule include regulation of virulence in general, infection prevention, and formation of biofilms.



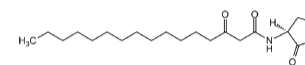
## N-(3-Oxohexadecanoyl)-L-homoserine lactone O0061

3-oxo-C16-HSL| 3OC16-HSL| 3-oxo-N-[(3S)-Tetrahydro-2-oxo-3-furanyl]-

**Specs:** min.97% (GC) | 1H-NMR | White solid  
**CAS:** 925448-37-9 **MF:** C20H35NO4 **MW:** 353.5

<http://www.chemodex.com/products/O0061>  
10 mg | 50 mg |

N-(3-Oxohexadecanoyl)-L-homoserine lactone is a small diffusible signaling molecule and is a member of N-acyl-homoserine lactone family. N-acylhomoserine lactones (AHL) are involved in quorum sensing, controlling gene expression, and cellular metabolism. The diverse applications of this kind of molecule include regulation of virulence in general, infection prevention, and formation of biofilms.



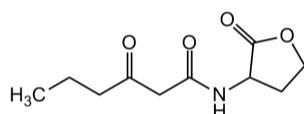
## N-(3-Oxohexanoyl)-DL-homoserine lactone O0051

3-oxo-C6-HSL| 3OC6-HSL| N-(bet.-Ketocaproyl)-DL-homoserine lactone

**Specs:** min.97% (GC) | 1H-NMR | White solid  
**CAS:** 76924-95-3 **MF:** C10H15NO4 **MW:** 213.2

<http://www.chemodex.com/products/O0051>  
10 mg | 50 mg |

N-(3-Oxohexanoyl)-DL-homoserine lactone is a small diffusible signaling molecule and is a member of N-acyl-homoserine lactone family. N-acylhomoserine lactones (AHL) are involved in quorum sensing, controlling gene expression, and cellular metabolism. The diverse applications of this kind of molecule include regulation of virulence in general, infection prevention, and formation of biofilms. At increased populations of bacteria, localized higher concentrations of 3OC6-HSL, an endogenous ligand to transcriptional factor LuxR, leads to increased production of both the AHL synthase and proteins responsible for bioluminescence.



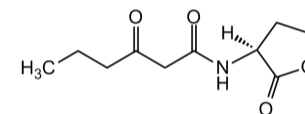
## N-(3-Oxohexanoyl)-L-homoserine lactone O0057

3-oxo-C6-HSL| N-(bet.-Ketocaproyl)-L-homoserine lactone

**Specs:** min.97% (GC) | 1H-NMR | White solid  
**CAS:** 143537-62-6 **MF:** C10H15NO4 **MW:** 213.2

<http://www.chemodex.com/products/O0057>  
10 mg | 50 mg |

N-(3-Oxohexanoyl)-L-homoserine lactone is a small diffusible signaling molecule and is a member of N-acyl-homoserine lactone family. N-acylhomoserine lactones (AHL) are involved in quorum sensing, controlling gene expression, and cellular metabolism. The diverse applications of this kind of molecule include regulation of virulence in general, infection prevention, and formation of biofilms. At increased populations of bacteria, localized higher concentrations of 3OC6-HSL, an endogenous ligand to transcriptional factor LuxR, leads to increased production of both the AHL synthase and proteins responsible for bioluminescence.



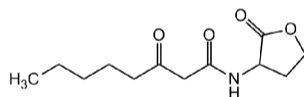
## N-(3-Oxo-octanoyl)-DL-homoserine lactone O0052

3-oxo-C8-HSL| 3OC8-HSL| N-(bet.-Keto-octanoyl)-L-homoserine

**Specs:** min.97% (GC) | 1H-NMR | White solid  
**CAS:** 106983-27-1 **MF:** C12H19NO4 **MW:** 241.3

<http://www.chemodex.com/products/O0052>  
25 mg | 100 mg |

N-(3-Oxo-octanoyl)-DL-homoserine lactone is a small diffusible signaling molecule and is a member of N-acyl-homoserine lactone family. N-acylhomoserine lactones (AHL) are involved in quorum sensing, controlling gene expression, and cellular metabolism. The diverse applications of this kind of molecule include regulation of virulence in general, infection prevention, and formation of biofilms. This compound stimulates the tra gene expression. It is an autoinducer and potent antagonist.



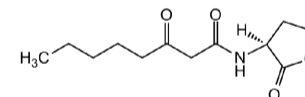
## N-(3-Oxo-octanoyl)-L-homoserine lactone O0058

3-oxo-C8-HSL| 3OC8-HSL| N-(bet.-Keto-octanoyl)-L-homoserine

**Specs:** min.97% (HPLC) | 1H-NMR | White solid  
**CAS:** 147795-39-9 **MF:** C12H19NO4 **MW:** 241.3

<http://www.chemodex.com/products/O0058>  
10 mg | 100 mg |

N-(3-Oxo-octanoyl)-L-homoserine lactone is a small diffusible signaling molecule and is a member of N-acyl-homoserine lactone family. N-acylhomoserine lactones (AHL) are involved in quorum sensing, controlling gene expression, and cellular metabolism. The diverse applications of this kind of molecule include regulation of virulence in general, infection prevention, and formation of biofilms. This compound stimulates the tra gene expression. It is an autoinducer and potent antagonist. Promotes the expression of the transcriptional activator (and LuxR homolog) TraR, in the gram-negative bacterium A. tumefaciens.



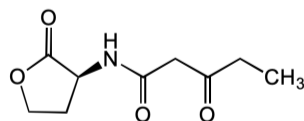
## N-(3-Oxopentanoyl)-L-homoserine lactone O0139

3-oxo-C5-L-HSL| 3-oxo-N-[(3S)-2-oxooxolan-3-yl]pentanamide

**Specs:** min.97% (HPLC) | 1H-NMR | White to off-white powder  
**CAS:** 148433-21-0 **MF:** C9H13NO4 **MW:** 199.2

<http://www.chemodex.com/products/O0139>  
10 mg | 50 mg |

N-(3-Oxopentanoyl)-L-homoserine lactone is a small diffusible signaling molecule and is a member of N-acyl-homoserine lactone family. N-acylhomoserine lactones (AHL) are involved in quorum sensing, controlling gene expression, and cellular metabolism. The diverse applications of this kind of molecule include regulation of virulence in general, infection prevention, and formation of biofilms. Numerous species of bacteria employ 3OC5-HSL in cell-to-cell communication.



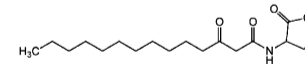
## N-(3-Oxotetradecanoyl)-DL-homoserine lactone O0055

3-oxo-C14-HSL| 3OC14-HSL| N-3-oxo-Myristoyl-DL-Homoserine lactone

**Specs:** min.97% (GC) | 1H-NMR | White solid  
**CAS:** 503610-29-5 **MF:** C18H31NO4 **MW:** 325.4

<http://www.chemodex.com/products/O0055>  
10 mg | 100 mg |

N-(3-Oxotetradecanoyl)-DL-homoserine lactone is a small diffusible signaling molecule and is a member of N-acyl-homoserine lactone family. N-acylhomoserine lactones (AHL) are involved in quorum sensing, controlling gene expression, and cellular metabolism. The diverse applications of this kind of molecule include regulation of virulence in general, infection prevention, and formation of biofilms. It appears later than shorter acyl chain AHLs in developing biofilms and like other long chain 3-oxo-AHLs, stimulates the production of putisolvin, which in turn inhibits biofilm formation.



# Homoserine Lactones

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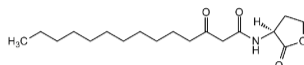
## N-(3-Oxotetradecanoyl)-L-homoserine lactone O0060

3-oxo-C14-HSL | 3OC14-HSL | N-3-oxo-Myristoyl-L-Homoserine lactone

**Specs:** min.97% (GC) | 1H-NMR | White solid  
**CAS:** 177158-19-9 **MF:** C18H31NO4 **MW:** 325.4

<http://www.chemodex.com/products/O0060>  
10 mg | 50 mg |

N-(3-Oxotetradecanoyl)-L-homoserine lactone is a small diffusible signaling molecule and is a member of N-acyl-homoserine lactone family. N-acylhomoserine lactones (AHL) are involved in quorum sensing, controlling gene expression, and cellular metabolism. The diverse applications of this kind of molecule include regulation of virulence in general, infection prevention, and formation of biofilms. It appears later than shorter acyl chain AHLs in developing biofilms and like other long chain 3-oxo-AHLs, stimulates the production of putisolvin, which in turn inhibits biofilm formation.



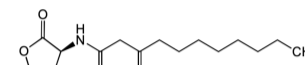
## N-(3-Oxoundecanoyl)-L-homoserine lactone O0140

3-oxo-C11-L-HSL | 3-oxo-N-[(3S)-2-oxooxolan-3-yl]undecanamide

**Specs:** min.97% (HPLC) | 1H-NMR | White to off-white powder  
**CAS:** 216596-70-2 **MF:** C15H25NO4 **MW:** 283.4

<http://www.chemodex.com/products/O0140>  
10 mg | 50 mg |

N-(3-Oxoundecanoyl)-L-homoserine lactone is a small diffusible signaling molecule and is a member of N-acyl-homoserine lactone family. N-acylhomoserine lactones (AHL) are involved in quorum sensing, controlling gene expression, and cellular metabolism. The diverse applications of this kind of molecule include regulation of virulence in general, infection prevention, and formation of biofilms. Numerous species of bacteria employ 3OC11-HSL in cell-to-cell communication. Shown to have immune suppressive activity, inhibiting murine and human leucocyte proliferation.



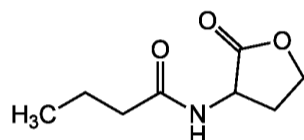
## N-Butanoyl-DL-homoserine lactone B0280

BHL | N-(2-Oxotetrahydro-3-furanyl)butanamide

**Specs:** min.97% (GC) | 1H-NMR | White solid  
**CAS:** 98426-48-3 **MF:** C8H13NO3 **MW:** 171.2

<http://www.chemodex.com/products/B0280>  
5 mg | 25 mg |

N-Butyryl-DL-homoserine lactone is a small diffusible signaling molecule and is a member of N-acyl-homoserine lactone family. N-acylhomoserine lactones (AHL) are involved in quorum sensing, controlling gene expression, and cellular metabolism. The diverse applications of this kind of molecule include regulation of virulence in general, infection prevention, and formation of biofilms.



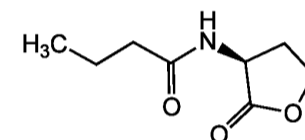
## N-Butanoyl-L-homoserine lactone B0267

C4-HSL | N-(2-Oxotetrahydro-3-furanyl)butanamide

**Specs:** min.97% (GC) | 1H-NMR | White solid  
**CAS:** 67605-85-0 **MF:** C8H13NO3 **MW:** 171.2

<http://www.chemodex.com/products/B0267>  
10 mg | 50 mg |

N-butyryl-L-Homoserine lactone is a small diffusible signaling molecule and is a member of N-acyl-homoserine lactone family. N-acylhomoserine lactones (AHL) are involved in quorum sensing, controlling gene expression, and cellular metabolism. The diverse applications of this kind of molecule include regulation of virulence in general, infection prevention, and formation of biofilms.



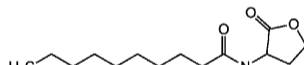
## N-Decanoyl-DL-homoserine lactone D0338

C10-HSL | N-(2-Oxotetrahydrofuran-3-yl)decanamide

**Specs:** min.97% (GC) | 1H-NMR | White solid  
**CAS:** 106983-36-2 **MF:** C14H25NO3 **MW:** 255.4

<http://www.chemodex.com/products/D0338>  
10 mg | 50 mg |

N-Decanoyl-DL-homoserine lactone (N-C10-HSL) is a small diffusible signaling molecule and is a member of N-acyl-homoserine lactone family. N-acylhomoserine lactones (AHL) are involved in quorum sensing, controlling gene expression, and cellular metabolism. The diverse applications of this kind of molecule include regulation of virulence in general, infection prevention, and formation of biofilms.



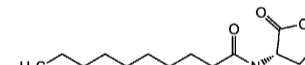
## N-Decanoyl-L-homoserine lactone D0332

N-[(3S)-Tetrahydro-2-oxo-3-furanyl]-decanamide | C10-HSL

**Specs:** min.98% (NMR) | 1H-NMR | White powder  
**CAS:** 177315-87-6 **MF:** C14H25NO3 **MW:** 255.4

<http://www.chemodex.com/products/D0332>  
5 mg | 50 mg |

N-Decanoyl-L-homoserine lactone is a small diffusible signaling molecule involved in quorum sensing, thereby controlling gene expression and affecting cellular metabolism. The applications of this molecule include regulation of virulence and exoproteases.



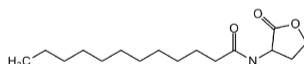
## N-Dodecanoyl-DL-homoserine lactone D0339

C12-HSL | N-(2-Oxotetrahydro-3-furanyl)dodecanamide | N-Lauroyl-DL-

**Specs:** min.97% (GC) | 1H-NMR | White solid  
**CAS:** 18627-38-8 **MF:** C16H29NO3 **MW:** 283.4

<http://www.chemodex.com/products/D0339>  
10 mg | 50 mg |

N-Dodecanoyl-DL-homoserine lactone (C12-HSL) is a small diffusible signalling molecule involved in quorum sensing, thereby controlling gene expression and affecting cellular metabolism in bacteria. In addition to regulating bacterial functions, C12-HSL activates NF-kappaB in RAW 264.7 macrophages, increasing the expression of TNF-alpha, interleukin-1beta (IL-1beta) and IL-8, while other lactones do not. In addition, C12-HSL alters cell cycling and metabolism of human keratinocyte (HaCaT) cells. It also was shown to induce cell death by apoptosis.



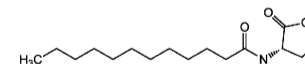
## N-Dodecanoyl-L-homoserine lactone D0335

N-[(3S)-Tetrahydro-2-oxo-3-furanyl]-dodecanamide | dDHL | C12-HSL

**Specs:** min.98% (NMR) | 1H-NMR | White powder  
**CAS:** 137173-46-7 **MF:** C16H29NO3 **MW:** 283.4

<http://www.chemodex.com/products/D0335>  
5 mg | 50 mg |

N-Dodecanoyl-L-homoserine lactone (C12-HSL) is a small diffusible signalling molecule involved in quorum sensing, thereby controlling gene expression and affecting cellular metabolism in bacteria. In addition to regulating bacterial functions, C12-HSL activates NF-kappaB in RAW 264.7 macrophages, increasing the expression of TNF-alpha, interleukin-1beta (IL-1beta) and IL-8, while other lactones do not. In addition, C12-HSL alters cell cycling and metabolism of human keratinocyte (HaCaT) cells. It is important to note that C12-HSL is distinct from N-3-oxo-dodecanoyl-L-homoserine lactone, which is produced at diffe-



# Homoserine Lactones

N-acyl homoserine lactones (AHLs) are a class of small signal molecules called autoinducers which coordinate gene expression based on cell density in gram-negative bacteria. This system is called quorum sensing. AHLs consist of a fatty acid coupled to a homoserine lactone (HSL). The molecules differ in functional group substitution (hydrogen, hydroxy or oxo group) at the third carbon of the chain (C3) and in chain length (typically C4 – C18) giving signal specificity.

## N-Ethanoyl-DL-homoserine lactone

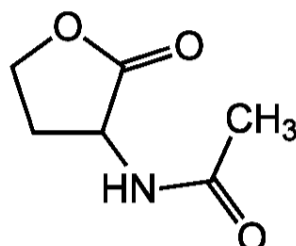
E0071

C2-HSL | N-Acetyl-DL-homoserine lactone | N-(Tetrahydro-2-oxo-3-furanyl)-

**Specs:** min.98% (GC) | 1H-NMR | White to off-white powder  
**CAS:** 114375-78-9 **MF:** C<sub>6</sub>H<sub>9</sub>NO<sub>3</sub> **MW:** 143.14

<http://www.chemodex.com/products/E0071>  
5 mg | 25 mg |

N-Ethanoyl-DL-homoserine lactone is the shortest alkyl homologue and most polar of a family of mediators of cell to cell interactions in bacterial biofilms. Acylhomoserine lactones have been detected in hundreds of bacterial species. N-acylhomoserine lactones (AHL) are involved in quorum sensing, controlling gene expression, and cellular metabolism. N-Ethanoyl-DL-homoserine lactone is not found in nature and can serve as a polar negative control for quorum sensing events.



## N-Ethanoyl-L-homoserine lactone

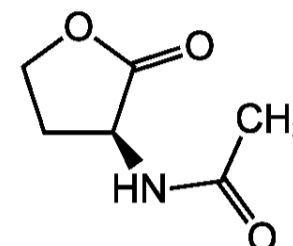
E0072

C2-HSL | N-Acetyl-L-homoserine lactone | N-[(3S)-Tetrahydro-2-oxo-3-furanyl]-

**Specs:** min.98% (GC) | 1H-NMR | White powder  
**CAS:** 51524-71-1 **MF:** C<sub>6</sub>H<sub>9</sub>NO<sub>3</sub> **MW:** 143.14

<http://www.chemodex.com/products/E0072>  
5 mg | 25 mg |

N-Ethanoyl-L-homoserine lactone is the shortest alkyl homologue and most polar of a family of mediators of cell to cell interactions in bacterial biofilms. Acylhomoserine lactones have been detected in hundreds of bacterial species. N-acylhomoserine lactones (AHL) are involved in quorum sensing, controlling gene expression, and cellular metabolism. N-Ethanoyl-L-homoserine lactone is not found in nature and can serve as a polar negative control for quorum sensing events.



## N-Heptanoyl-DL-homoserine lactone

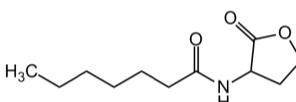
H0201

C7-HSL | N-(2-Oxotetrahydro-3-furanyl)heptanamide

**Specs:** min.97% (GC) | 1H-NMR | White solid  
**CAS:** 106983-26-0 **MF:** C<sub>11</sub>H<sub>19</sub>NO<sub>3</sub> **MW:** 213.3

<http://www.chemodex.com/products/H0201>  
10 mg | 50 mg |

N-Heptanoyl-L-homoserine lactone (C7-HSL) is a small diffusible signaling molecule involved in quorum sensing, thereby controlling gene expression and affecting cellular metabolism. The diverse applications of this kind of molecule include regulation of virulence, infection prevention and septicemia in fish.



## N-Heptanoyl-L-homoserine lactone

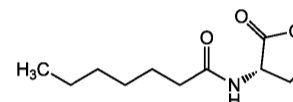
H0112

N-[(3S)-Tetrahydro-2-oxo-3-furanyl]-heptanamide | C7-HSL

**Specs:** min.98% (NMR) | 1H-NMR | White powder  
**CAS:** 177158-20-2 **MF:** C<sub>11</sub>H<sub>19</sub>NO<sub>3</sub> **MW:** 213.3

<http://www.chemodex.com/products/H0112>  
5 mg | 50 mg |

N-Heptanoyl-L-homoserine lactone (C7-HSL) is a small diffusible signaling molecule involved in quorum sensing, thereby controlling gene expression and affecting cellular metabolism. The diverse applications of this molecule include regulation of virulence, infection prevention and septicemia in fish.



## N-Hexadecanoyl-DL-homoserine lactone

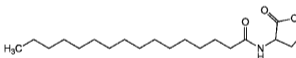
H0202

C16-HSL | N-Palmitoyl-DL-homoserine

**Specs:** min.97% (GC) | 1H-NMR | White solid  
**CAS:** 98206-81-6 **MF:** C<sub>20</sub>H<sub>37</sub>NO<sub>3</sub> **MW:** 339.5

<http://www.chemodex.com/products/H0202>  
10 mg | 50 mg |

N-Hexadecanoyl-DL-homoserine lactone (C16-HSL) is a small diffusible signaling molecule and is a member of N-acyl-homoserine lactone family. N-acylhomoserine lactones (AHL) are involved in quorum sensing, controlling gene expression, and cellular metabolism. C16-HSL is a lipophilic, long acyl side-chain bearing AHL, produced by the LuxI AHL synthase homolog SinI involved in quorum-sensing signaling in *S. meliloti*, a nitrogen-fixing bacterial symbiont of certain legumes. C16-HSL is the most abundant AHL produced by the proteobacterium *R. capsulatus* and activates genetic exchange between *R. capsulatus* cells. It tends to



## N-Hexadecanoyl-L-homoserine lactone

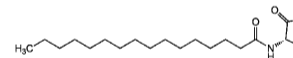
H0113

C16-HSL | N-Palmitoyl-L-homoserine

**Specs:** min.97% (GC) | 1H-NMR | White solid  
**CAS:** 87206-01-7 **MF:** C<sub>20</sub>H<sub>37</sub>NO<sub>3</sub> **MW:** 339.5

<http://www.chemodex.com/products/H0113>  
10 mg | 50 mg |

N-Hexadecanoyl-L-homoserine lactone is a small diffusible signaling molecule and is a member of N-acyl-homoserine lactone family. N-acylhomoserine lactones (AHL) are involved in quorum sensing, controlling gene expression, and cellular metabolism. C16-HSL is a lipophilic, long acyl side-chain bearing AHL, produced by the LuxI AHL synthase homolog SinI involved in quorum-sensing signaling in *S. meliloti*, a nitrogen-fixing bacterial symbiont of certain legumes. C16-HSL is the most abundant AHL produced by the proteobacterium *R. capsulatus* and activates genetic exchange between *R. capsulatus* cells. It tends to



## N-Hexanoyl-DL-homoserine lactone

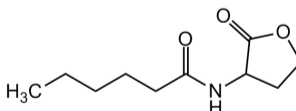
H0200

C6-HSL | N-Caproyl-DL-homoserine lactone | N-(2-Oxotetrahydro-3-furanyl)-

**Specs:** min.97% (GC) | 1H-NMR | White solid  
**CAS:** 106983-28-2 **MF:** C<sub>10</sub>H<sub>17</sub>NO<sub>3</sub> **MW:** 199.3

<http://www.chemodex.com/products/H0200>  
25 mg | 50 mg |

N-Hexanoyl-DL-homoserine lactone is a small diffusible signaling molecule involved in quorum sensing, controlling gene expression and affecting cellular metabolism. The diverse applications of this kind of molecule include regulation of virulence in general and in cystic fibrosis, infection prevention, slime and biofilm reduction in commercial agriculture and aquaculture industries, food spoilage prevention and septicemia in fish.



## N-Hexanoyl-L-homoserine lactone

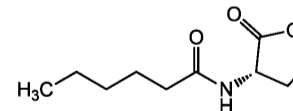
H0111

N-[(3S)-Tetrahydro-2-oxo-3-furanyl]-hexanamide | C6-HSL | HHL | N-Caproyl-L-

**Specs:** min.98% (NMR) | 1H-NMR | White powder  
**CAS:** 147852-83-3 **MF:** C<sub>10</sub>H<sub>17</sub>NO<sub>3</sub> **MW:** 199.3

<http://www.chemodex.com/products/H0111>  
10 mg | 50 mg |

N-Hexanoyl-L-homoserine lactone is a small diffusible signaling molecule involved in quorum sensing, controlling gene expression and affecting cellular metabolism. The diverse applications of this molecule include regulation of virulence in general and in cystic fibrosis, infection prevention, slime and biofilm reduction in commercial agriculture and aquaculture industries, food spoilage prevention and septicemia in fish.



# Homoserine Lactones

N-acyl homoserine lactones (AHLs) are a class of small signal molecules called autoinducers which coordinate gene expression based on cell density in gram-negative bacteria. This system is called quorum sensing. AHLs consist of a fatty acid coupled to a homoserine lactone (HSL). The molecules differ in functional group substitution (hydrogen, hydroxy or oxo group) at the third carbon of the chain (C3) and in chain length (typically C4 – C18) giving signal specificity.

## N-Octadecanoyl-L-homoserine lactone

**O0137**

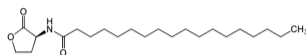
C18-L-HSL| N-[(3S)-tetrahydro-2-oxo-3-furanyl]-octadecanamide

**Specs:** min.97% (HPLC) | 1H-NMR | White to off-white powder

**CAS:** 479050-96-9 **MF:** C22H41NO3 **MW:** 367.6

<http://www.chemodex.com/products/O0137>

10 mg | 50 mg |



N-Octadecanoyl-L-homoserine lactone is a small diffusible signaling molecule and is a member of N-acyl-homoserine lactone family. N-acylhomoserine lactones (AHL) are involved in quorum sensing, controlling gene expression, and cellular metabolism. This regulatory process manifests itself with a variety of phenotypes including biofilm formation and virulence factor production. Regulation of bacterial quorum sensing signaling systems to inhibit pathogenesis represents a new approach to antimicrobial therapy in the treatment of infectious diseases. C18-HSL is a lipophilic, long acyl side-chain bearing AHL, produced by the LuxI AHL

## N-Octanoyl-L-homoserine lactone

**O0038**

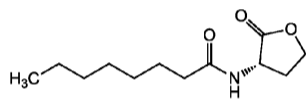
N-[(3S)-Tetrahydro-2-oxo-3-furanyl]-octanamide| C8-HSL| OHL

**Specs:** min.98% (NMR) | 1H-NMR | White powder

**CAS:** 147852-84-4 **MF:** C12H21NO3 **MW:** 227.3

<http://www.chemodex.com/products/O0038>

5 mg | 50 mg |



N-Octanoyl-L-homoserine lactone (C8-HSL) is a small diffusible signaling molecule involved in quorum sensing, thereby controlling gene expression and affecting cellular metabolism. The applications of this molecule include infection prevention and regulation of virulence in general and in cystic fibrosis.

## N-Tetradecanoyl-DL-homoserine lactone

**T0147**

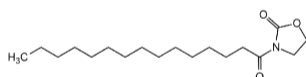
C14-HSL| tDHL| N-(2-Oxotetrahydrofuran-3-yl)tetradecanamide| N-Myristoyl-DL-

**Specs:** min.97% (GC) | 1H-NMR | White solid

**CAS:** 98206-80-5 **MF:** C18H33NO3 **MW:** 311.5

<http://www.chemodex.com/products/T0147>

10 mg | 50 mg |



N-Tetradecanoyl-DL-homoserine lactone is a small diffusible signaling molecule and is a member of N-acyl-homoserine lactone family. N-acylhomoserine lactones (AHL) are involved in quorum sensing, controlling gene expression, and cellular metabolism. The diverse applications of this kind of molecule include regulation of virulence in general, infection prevention, and formation of biofilms. It appears later than shorter acyl chain AHLs in developing biofilms and, like other long chain AHLs, stimulates bacterial growth. C14-HSL also alters the proteolytic activity and enhances the migration of some strains of *Proteus mirabilis*. Indu-

## N-Octanoyl-DL-homoserine lactone

**O0062**

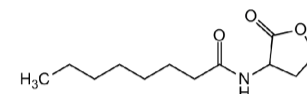
C8-HSL| OHL| N-(2-Oxotetrahydrofuran-3-yl)octanamide| N-Capryloyl-DL-

**Specs:** min.97% (GC) | 1H-NMR | White solid

**CAS:** 106983-30-6 **MF:** C12H21NO3 **MW:** 227.3

<http://www.chemodex.com/products/O0062>

10 mg | 50 mg |



N-Octanoyl-DL-homoserine lactone is a small diffusible signaling molecule and is a member of N-acyl-homoserine lactone family. N-acylhomoserine lactones (AHL) are involved in quorum sensing, controlling gene expression, and cellular metabolism. The diverse applications of this kind of molecule include regulation of virulence in general, infection prevention, and formation of biofilms.

## N-Pentanoyl-L-homoserine lactone

**P0486**

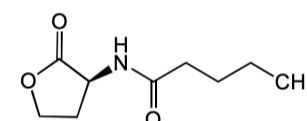
C5-L-HSL| N-[(3S)-tetrahydro-2-oxo-3-furanyl]-pentanamide

**Specs:** min.97% (HPLC) | 1H-NMR | White to off-white powder

**CAS:** 148497-11-4 **MF:** C9H15NO3 **MW:** 185.2

<http://www.chemodex.com/products/P0486>

10 mg | 50 mg |



N-Pentanoyl-L-homoserine lactone is a small diffusible signaling molecule and is a member of N-acyl-homoserine lactone family. N-acylhomoserine lactones (AHL) are involved in quorum sensing, controlling gene expression, and cellular metabolism. This regulatory process manifests itself with a variety of phenotypes including biofilm formation and virulence factor production. Regulation of bacterial quorum sensing signaling systems to inhibit pathogenesis represents a new approach to antimicrobial therapy in the treatment of infectious diseases.

## N-Tetradecanoyl-L-homoserine lactone

**T0144**

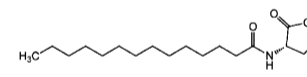
C14-HSL| tDHL| N-[(3S)-2-Oxotetrahydro-3-furanyl]tetradecanamide| N-

**Specs:** min.97% (GC) | 1H-NMR | White solid

**CAS:** 202284-87-5 **MF:** C18H33NO3 **MW:** 311.5

<http://www.chemodex.com/products/T0144>

10 mg | 50 mg |



N-Tetradecanoyl-L-homoserine lactone is a small diffusible signaling molecule and is a member of N-acyl-homoserine lactone family. N-acylhomoserine lactones (AHL) are involved in quorum sensing, controlling gene expression, and cellular metabolism. The diverse applications of this kind of molecule include regulation of virulence in general, infection prevention, and formation of biofilms. It appears later than shorter acyl chain AHLs in developing biofilms and, like other long chain AHLs, stimulates bacterial growth. C14-HSL also alters the proteolytic activity and enhances the migration of some strains of *Proteus mirabilis*. Indu-