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**MATERIAL DATA SHEET**

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**Recombinant *E. coli* O157:H7 NleL Catalytic Domain****Cat. # E3-250**

NleL (Non-Lee-encoded effector Ligase, also known as espX7) is an effector protein translocated into host cells via the type III secretion system of *Escherichia coli* O157:H7, a widespread pathogen causing severe foodborne diseases. Although the biological relevance of NleL is presently unknown, recent studies clearly demonstrate that this protein is functionally related to the HECT (Homologous to E6AP Carboxy Terminus) class E3 Ubiquitin Ligases of higher eukaryotes. NleL shows no primary sequence homology to any eukaryotic proteins, but biochemical and structural studies revealed both N-terminal and C-terminal lobes connected by a flexible linker, and a catalytic cysteine that accepts ubiquitin from E2 carrier proteins, both hallmarks of HECT domain ligases. NleL catalyzes the formation of mixed K6 and K48-linked unanchored polyubiquitin chains. This recombinant protein contains amino acid residues 170-782 (UniProt Q8X5G6 numbering).

**Product Information**

<b>Quantity:</b>	100 µg
<b>MW:</b>	87 kDa
<b>Source:</b>	<i>E. coli</i> -derived Accession # Q8X5G6
<b>Stock:</b>	X mg/ml (X µM) in 50 mM HEPES pH 7.5, 150 mM NaCl, 10% Glycerol (v/v), 1 mM TCEP
<b>Purity:</b>	>90%, by SDS-PAGE under reducing conditions and visualized by Colloidal Coomassie® Blue stain.

## Use & Storage

**Use:** *Escherichia coli O157:H7 recombinant NleL Catalytic Domain* is a bacterial HECT class Ubiquitin Ligases (E3) that catalyzes the formation of mixed K6 and K48-linked unanchored polyubiquitin chains. Reaction conditions will need to be optimized for each specific application. We recommend an initial *E. coli O157:H7 recombinant NleL* concentration of 0.1-0.5  $\mu$ M.

**Storage:** **Use a manual defrost freezer and avoid repeated freeze-thaw cycles.**

- 12 months from date of receipt, -70 °C as supplied.
- 3 months, -70 °C under sterile conditions after opening.

## Literature

### References:

1. Lin D.Y., et al. (2011) J. Biol. Chem. **286**: 441-449.
2. Lin D.Y., et al. (2012) Proc. Natl. Acad. Sci. **109**: 1925-1930.

***For research use only. Not for use in humans.***