



# Creative Enzymes

Diagnostic Enzymes

## Recombinant Acyl-CoA Synthetase (ACS)

### Product Information

<b>Cat#</b>	BDE-003
<b>Description</b>	In non-esterified fatty acid (NEFA) detection, acyl-CoA synthetase (ACS) catalyzes the first reaction, converting free fatty acids to acyl-CoA, AMP, and pyrophosphate in the presence of coenzyme A and ATP.
<b>Applications</b>	Catalyzes the activation of fatty acids to form acyl-CoA, acting as the key initiating enzyme in the free fatty acid enzymatic assay.
<b>CAS No.</b>	9013-18-7
<b>Enzyme Commission Number</b>	EC 6.2.1.3
<b>Form</b>	White powder, lyophilized
<b>Source</b>	Recombinant
<b>Activity</b>	≥ 5 U/mg-protein
<b>Unit Definition</b>	One unit will convert one micromole of fatty acid to acyl-CoA per min at pH 7.5 at 37°C.
<b>Molecular Weight</b>	77 kDa (SDS-PAGE)
<b>Optimum pH</b>	7.5
<b>Optimum temperature</b>	50°C
<b>pH Stability</b>	6.5-7.5 (25°C, 18 h)
<b>Thermal Stability</b>	< 45°C (pH 7.5, 10 min)
<b>Inhibitors</b>	Ag <sup>+</sup> , Hg <sup>2+</sup> , Fe <sup>3+</sup> , Zn <sup>2+</sup> , Cu <sup>2+</sup>
<b>Storage</b>	Store at ≤ -20 °C.

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