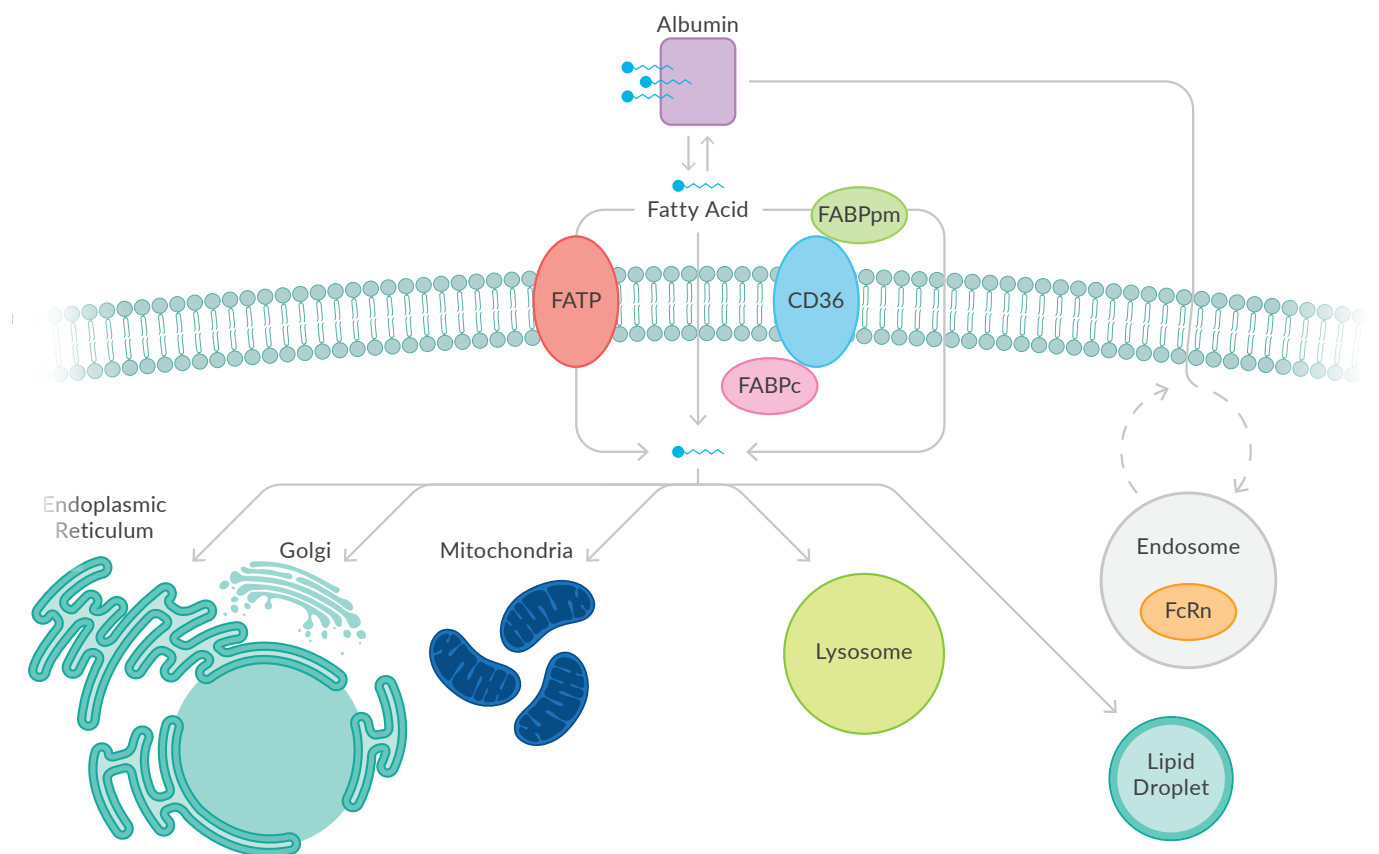


BSA Complexes for Cellular Delivery of Fatty Acids



Bovine serum albumin (BSA)-fatty acid complexes are commonly used in cell culture and biochemical assays to deliver fatty acids in a physiologically relevant way. Cayman offers a variety of HSA- and BSA-fatty acid complexes at different ratios and molarities for diverse assay needs, packaged in a convenient, ready-to-use format.



Potential pathways for BSA-FA complexes to increase intracellular FA levels. Effects on organelles are FA-specific. Figure is adapted from Schwenk, et al. PMID 20206486.

Cayman BSA Complexes Help Researchers

- ✓ Efficiently deliver fatty acids to cells in culture
- ✓ Ensure fatty acid-specific cellular effects
- ✓ Monitor fatty acid metabolism

Designed for Cell Culture Applications

- ✓ Prepared using fatty acid-free serum albumin without harsh reagents
- ✓ Available in multiple FA:BSA ratios to fit your workflow
- ✓ Sterile-filtered products available
- ✓ Reagent sets with matched BSA controls available



Which BSA Complexes are Best for My Application?

Lipid-Mediated Cellular Stress

Excess intracellular lipids can induce cellular stress through endoplasmic reticulum stress, oxidative stress, and lipid peroxidation.

Applications

- Lipotoxicity
- Lipid peroxidation
- Inflammatory signaling
- Fatty acid-mediated tumorigenesis

Common Assays & Readouts

- Fatty acid oxidation
- Fatty acid uptake
- Lipid droplet formation
- Cytokine production

Featured Product

BSA-Arachidonate Polyunsaturated Fatty Acid Complex (1 mM)

Item No. 34931

MASLD/MASH Models

Lipid accumulation is a hallmark of metabolic dysfunction-associated steatotic liver disease (MASLD) and its progression to MASH.

Applications

- Fatty acid oxidation
- Triglyceride synthesis
- Lipid-induced cellular toxicity

Common Assays & Readouts

- Mitochondrial respiration
- Triglyceride quantification
- Neutral lipid staining
- Cell viability

Featured Product

BSA Metabolic Stress Reagent Set (Palmitate and Oleate BSA Complexes)

Item No. 45544

A set of four BSA-fatty acid complexes with a paired control

Metabolic Flux

Unlabeled and isotopically labeled BSA-FA complexes can improve understanding of fatty acid dynamics in non-pathological and pathological conditions.

Applications

- Fatty acid metabolism
- Tissue-specific metabolism
- Isotope tracing through the citric acid cycle
- Mapping the metabolic fate of fatty acids

Common Assays & Readouts

- Fatty acid uptake
- Fatty acid oxidation
- Substrate utilization

Featured Product

BSA-¹³C₁₆-Palmitate Saturated Fatty Acid Complex (5 mM)

Item No. 43209

Lipid Metabolism

Lipid metabolism is a tightly regulated process that controls the uptake, synthesis, transport, and breakdown of lipids.

Applications

- Adipocyte differentiation & thermogenesis
- Cellular energy balance
- Obesity & insulin resistance research

Common Assays & Readouts

- Fatty acid uptake & utilization
- Lipid droplet analysis
- Gene expression
- Lipidomics

Featured Product

BSA-Linoleate Reagent Set (1 mM)

Item No. 44717

Contains a BSA-linoleate complex solution and a fatty acid-free BSA control solution

Saturated Fatty Acids

Lipid-Mediated Cellular Stress,
MASLD/MASH Models,
Metabolic Flux,
Lipid Metabolism

Item No.	Product Name	FA:BSA Ratio	Applications
43457	BSA-Decanoate Saturated Fatty Acid Complex (1 mM)	6:1 Decanoate:BSA	
44989	BSA-Myristate Saturated Fatty Acid Complex (5 mM)	6:1 Myristate:BSA	
34933	BSA-Octanoate Saturated Fatty Acid Complex (1 mM)	6:1 Octanoate:BSA	
43443	BSA-Palmitate Saturated Fatty Acid Complex (1.67 mM)	2:1 Palmitate:BSA	
29558	BSA-Palmitate Saturated Fatty Acid Complex (5 mM)	6:1 Palmitate:BSA	
44156	BSA-Palmitate Saturated Fatty Acid Complex (10 mM)	6:1 Palmitate:BSA	
44501	BSA-NBD-Palmitate Saturated Fatty Acid Complex (1 mM)	6:1 NBD-Palmitate:BSA	
44253	BSA-NBD-Stearate Saturated Fatty Acid Complex (1 mM)	6:1 NBD-Stearate:BSA	
43451	BSA-Stearate Saturated Fatty Acid Complex (0.34 mM)	2:1 Stearate:BSA	
38107	BSA-Stearate Saturated Fatty Acid Complex (1 mM)	6:1 Stearate:BSA	

Monounsaturated Fatty Acids

Item No.	Product Name	FA:BSA Ratio	Applications
29557	BSA-Oleate Monounsaturated Fatty Acid Complex (5 mM)*	6:1 Oleate:BSA	
45404	BSA-Palmitoleate ω-7 Monounsaturated Fatty Acid Complex (5 mM)	6:1 Palmitoleate:BSA	
39150	BSA-13(Z)-Docosenoate Monounsaturated Fatty Acid Complex (1 mM)	6:1 13(Z)-Docosenoate:BSA	
44252	BSA- <i>trans</i> -Vaccenate Monounsaturated Fatty Acid Complex (1 mM)	6:1 <i>trans</i> -Vaccenate:BSA	

*10 mM concentration also available at www.caymanchem.com

Polyunsaturated Fatty Acids

Item No.	Product Name	FA:BSA Ratio	Applications
34931	BSA-Arachidonate Polyunsaturated Fatty Acid Complex (1 mM)	6:1 Arachidonate:BSA	
35872	BSA-Docosahexaenoate Polyunsaturated Fatty Acid Complex (1 mM)*	6:1 Docosahexaenoate:BSA	
44502	BSA-Docosapentaenoate ω-6 Polyunsaturated Fatty Acid Complex (1 mM)	6:1 all- <i>cis</i> -4,7,10,13,16-DPA:BSA	
43473	BSA-Eicosapentaenoate Polyunsaturated Fatty Acid Complex (1 mM)*	6:1 Eicosapentaenoate:BSA	
44254	BSA-Stearidonate Polyunsaturated Fatty Acid Complex (1 mM)	6:1 Stearidonate:BSA	
38649	BSA-Linoleate ω-6 Polyunsaturated Fatty Acid Complex (1 mM)	6:1 Linoleate:BSA	
39063	BSA-α-Linolenate ω-3 Polyunsaturated Fatty Acid Complex (1 mM)*	6:1 α-Linolenate:BSA	
39149	BSA-γ-Linolenate Polyunsaturated Fatty Acid Complex (1 mM)	6:1 γ-Linolenate:BSA	
43935	BSA-α-Eleostearate Polyunsaturated Fatty Acid Complex (1 mM)	6:1 α-Eleostearate:BSA	
44413	BSA- <i>cis</i> -Parinarate Polyunsaturated Fatty Acid Complex (1 mM)	6:1 <i>cis</i> -Parinarate:BSA	
44496	BSA-Polyunsaturated Fatty Acid Complex Mixture (0.33 mM)	6:1 PUFA:BSA	

*5 mM concentration also available at www.caymanchem.com

Stable Isotope-Labeled Complexes

Item No.	Product Name	FA:BSA Ratio	Applications
43988	BSA-Palmitate-d ₉ Saturated Fatty Acid Complex (1 mM)	6:1 Palmitate-d ₉ :BSA	
43209	BSA- ¹³ C ₁₆ -Palmitate Saturated Fatty Acid Complex (5 mM)	6:1 Palmitate- ¹³ C ₁₆ :BSA	
43888	BSA-Oleate-d ₁₇ Monounsaturated Fatty Acid Complex (1 mM)	6:1 Oleate-d ₁₇ :BSA	
43591	BSA-Docosahexaenoate-d ₅ Polyunsaturated Fatty Acid Complex (1 mM)	6:1 Docosahexaenoate-d ₅ :BSA	
44311	BSA-Eicosapentaenoate-d ₅ Polyunsaturated Fatty Acid Complex (1 mM)	6:1 Eicosapentaenoate-d ₅ :BSA	

View a complete list of isotope-labeled complexes at www.caymanchem.com

Additional Albumin Complexes Available

HSA Complexes

Item No.	Product Name
45417	HSA-Oleate Monounsaturated Fatty Acid Complex (5 mM)
43472	HSA-Palmitate Saturated Fatty Acid Complex (1 mM)
45018	HSA-Palmitate Saturated Fatty Acid Complex (5 mM)

Custom HSA complexes available

Albumin Controls

Item No.	Product Name
34932	BSA Control for BSA-Fatty Acid Complexes (1 mM)
29556	BSA Control for BSA-Fatty Acid Complexes (5 mM)
44217	BSA Control for BSA-Fatty Acid Complexes (10 mM)
45019	HSA Control for HSA-Fatty Acid Complexes (5 mM)

Reagent Sets with Paired Controls

Item No.	Product Name
45544	BSA Metabolic Stress Reagent Set (Palmitate and Oleate BSA Complexes)
44717	BSA-Linoleate Reagent Set (1 mM)
44712	BSA-Oleate Reagent Set (5 mM)
44698	BSA-Palmitate Reagent Set (5 mM)

Specialty BSA Complexes

Item No.	Product Name
44505	BSA-Cholate Bile Acid Complex (5 mM)
44414	BSA-Prostaglandin E ₂ Complex (1 mM)
45552	BSA-Semaglutide Complex (1.67 mM)

Featured Product Citations

Cited in 75+ Peer-Reviewed Articles

Cell Reports (2025) -
Atrial lineage commitment
and metabolic regulation

 BSA-Linoleate ω-6 Polyunsaturated Fatty Acid Complex (1 mM)

 BSA-Palmitate Saturated Fatty Acid Complex (5 mM)

 BSA-Oleate Monounsaturated Fatty Acid Complex (5 mM)

PLoS Pathogens (2025) -
Fatty acid metabolism in
Epstein-Barr virus-infected B cells

 BSA-Palmitate Saturated Fatty Acid Complex (5 mM)

 BSA-Oleate Monounsaturated Fatty Acid Complex (5 mM)

 BSA Control for BSA-Fatty Acid Complexes (5 mM)

Endocrinology (2025) -
Palmitate lipotoxicity and
breast cancer metabolism

 BSA-Palmitate Saturated Fatty Acid Complex (5 mM)

 BSA-Oleate Monounsaturated Fatty Acid Complex (5 mM)

 BSA Control for BSA-Fatty Acid Complexes (5 mM)

Visit www.caymanchem.com for additional product citations

Custom Complexes & Bulk Sizes

- Alternate fatty acids or lipids
 - Custom concentrations
 - Modified FA:BSA/HSA ratios
- Isotopically labeled complexes
 - Custom packaging & vial sizes
 - Bulk quantities

Contact sales@caymanchem.com to learn more

