Data Sheet (Cat.No.TRP-00630)

TargetMol

Mouse Serum Albumin

Chemical Properties

CAS No. :

Formula:

Molecular Weight:

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Mouse Serum Albumin is the most abundant protein in plasma and can leak into the brain parenchyma when the blood-brain barrier (BBB) is compromised. It induces astrocytes to convert to the A1 phenotype, significantly increases levels of Elovl1, promotes very-long-chain fatty acids (VLSFAs) secretion, and triggers neuronal lipid apoptosis through the endoplasmic reticulum stress response pathway. Additionally, microglia activated by Mouse Serum Albumin significantly trigger tau protein phosphorylation at multiple sites (Ser202/Thr205) via the NLRP3 inflammasome pathway. It also impairs spatial learning and memory in mice. Mouse Serum Albumin is useful for studying neurodegenerative diseases such as Alzheimer's disease (AD) and frontotemporal dementia (FTD).
Targets(IC50)	Apoptosis,Caspase,NOD-like Receptor (NLR),Microtubule Associated
In vitro	Mouse Serum Albumin at a concentration of 7 uM for 48 hours significantly reduces the average branch length, terminal stereomicroscope voxel count, and branch number in primary neurons. Additionally, when exposed for 24 hours, it upregulates Elovl1 mRNA and protein levels in primary astrocytes. Prolonged exposure for 48 hours induces significant neuronal apoptosis and increases TUNEL-positive cells in primary neurons.
In vivo	Intracerebral injection of Mouse Serum Albumin (1 μL per injection; administered intraventricularly; once every 4 days for 16 days) impairs spatial learning and memory abilities in mice.

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