

Intracellular energy storage substances

Relationship between amino acid and lipid metabolism in oleaginous eukaryotic microorganism. The factors that regulate lipid synthesis in oleaginous eukaryotic microorganisms are as follows: (1) the enrichment of the precursor compound pool, (2) remodeling of intracellular energy storage substances, (3) intracellular transduction and metabolic feedback of signals.

Rough ER Golgi apparatus Vesicle (A) To synthesize lipids and modify toxic substances in order to render them harmless (B) To synthesize and isolate proteins for secretion or for use in the cell (C) To catabolize nutrients and produce ATP for intracellular energy storage (D) To synthesize all ribosomal proteins 9.

Although counterregulatory hormones and mediators of the fight-or-flight responses are well defined at many levels, how energy stores per se are integrated into this system remains an enigmatic question. Recent years have seen the adipose tissue become a central focus for mediating intracellular sig ...

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The effect of energy metabolism on intracellular pH was studied in boar spermatozoa using nuclear magnetic resonance (NMR) spectroscopy and confocal microscopy with the pH-sensitive dye seminaphthorhodafluor (SNARF-1). ... thus, only slightly below the extracellular pH (pH(e) 7.3). Storage of spermatozoa in a glucose-free medium at 15 degrees C ...

The mechanisms involved in BaP uptake and intracellular tr ... Energy-dependent uptake of benzo[a]pyrene and its cytoskeleton-dependent intracellular transport by the telluric fungus *Fusarium solani* ... The perfect co-localization of BaP and BODIPY reveals that lipid bodies constitute the intracellular storage sites of BaP in *F. solani*. Our ...

PHAs are biodegradable polyesters of hydroxyalkanoates (HA) produced from renewable resources by using microorganisms as intracellular carbon and energy storage compounds. Even though PHAs are promising candidate for biodegradable polymers, however, the production cost limit their application on an industrial scale.

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electron storage. The highest EPS content (extracellular storage) was observed in the continuously fed EABf under an intermittent anode potential, showing that constant access to electron donor and intermittent access to

Cellular storage granules are essential components within cells, serving as reservoirs for substances that support cellular metabolism. These granules store compounds like glycogen, polyphosphate, and sulfur, helping maintain energy balance and support metabolic processes under varying environmental conditions.

It is an essential building block for nucleic acids biosynthesis and crucial intracellular energy storage. However, one of the most interesting functions of ATP is the role of a signaling molecule. Numerous studies indicate the involvement of ATP-dependent pathways in maintaining the proper functioning of individual tissues and organs ...

Glycogen, a water-soluble polymer of α -1,4-linked and α -1,6-linked glucose, is a widespread form of carbon and energy storage that promotes survival during starvation 26. During the intracellular ...

This storage was linked to the presence of living *Geobacter* and shows that energy gain and carbon source starvation were the triggers for intracellular electron storage. ... polymeric substances ...

Organisms throughout the tree of life accumulate chemical resources, in particular forms or compartments, to secure their availability for future use. Here we review microbial storage and its ...

During the metabolism of P-accumulating microorganisms, glycogen and PHA as the intracellular energy storage substances play a very important role, and their consumption and circulation process ...

Introduction. The human gastrointestinal tract (GIT) contains a vast, complex and dynamic microbial community, termed the gut microbiota. 1,2 This microbial population acts as a key contributor to host metabolism and physiology, and for this reason impacts on host health. 3-5 For example, elements of the gut microbiota stimulate proliferation and differentiation of i ...

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