🖄 BIOZONE

AP BIOLOGY



AP Biology 2021 Edition

BIOZONE's new title for **AP® Biology** is the third edition of this popular resource. Now in **full color** and **one comprehensive volume**, it has been completely revised to address the **2020 AP® Biology CED**. This title expertly balances breadth of content with depth of understanding, employing a wide variety of activities to develop the student's skills in key science practices. In keeping with the approach of the new **CED**, AP® Biology deemphasizes the traditional approach of content coverage to focus on inquiry, critical thinking, and enduring understanding of key concepts. Clear presentation, a highly visual approach, and integration of relevant and engaging illustrative examples readies students for college level courses, developing the essential inquiry and reasoning skills they will need as 21st century scientists.

Activity Page

Activity number

Activities are numbered to make navigation through the book easier.

Key question

Each activity has a key question summarizing its primary focus. It helps students to understand where the activity's emphasis lies.

Write-on answers

Students write their answers directly onto the page. This becomes their record of work and helps them when it is time to review for tests and exams.

Critical thinking questions

A direct questioning style helps students to easily identify what is being asked. A wide range of tasks, including free response, data analysis and presentation, and interpretation and evaluation of evidence, scaffold student learning to build confidence and competence.

8 Comparing Fibrous and Globular Proteins

proteins and disordered proteins such as casein). Globular

proteins are spherical and somewhat soluble forming collects in water (e.g. enzymes). Fibrous proteins have an elangated structure and are not water soluble. They provide stiffness and rigidity to the more fluid components of colls and tissues.

Easily water soluble

Properties of globular proteins

Jertiary structure critical to function

Polypeptide chains folded into a spherical shape

Functions of globular proteins

Regulatory, e.g. hormones (insulin)

ctive, e.g. immunoglobulins

Structural (rarely), e.g. actin and tubulir

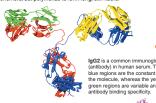
Catalytic, e.g. enzymes

Transport, e.a. hemoalobin

Key Question: How do the structure and properties of globular and librous proteins reflect their contrasting roles? Proteins can be classified according to structure or function. Globular and fibrous proteins form two of the main broad structural groups of proteins (the others being membrane

Globular proteins

The shape of globular proteins is a function of their tertiary structure. Some proteins (e.g. actin and tubulin) are globular and soluble as monomers, but polymerize to form long, stiff fibers.

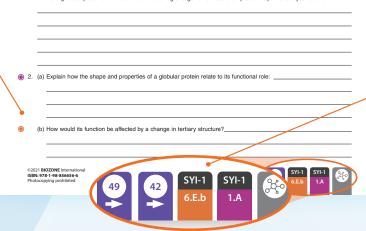


sulin is a peptide hormone volved in the regulation of blood ucose. Insulin is composed of two aptide chains linked together by an ab

RuBisCo is a large multi-unit enzyme. It catalyzes the first step of carbon fixation in photosymtesis. It consists of bury and 8 small subunits and is the most automatin protoin on Earth.

How are globular proteins involved in the functioning of organisms? Use examples to help illustrate your answer

le and dete



Comprehensive diagrams

Provide an engaging, highly visual delivery of the important information.

Content organization

Logically organized content makes it easier for students to access and engage with the information.

Data driven activities

Answering questions based on the analysis and interpretation of real world data develops core skills in evidence-based reasoning and logical thinking. Communicating these analyses effectively builds skills in literacy.

Activity coding system

Tab codes indicate online support via BIOZONE's Resource Hub and identify the key science practices and big ideas that spiral across topics and units. Purple connect tabs point forward or back to related content in the book

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