

# Biology 09

# Cell

# Communication

# MCQ

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## 4. Chapter: Biology 09 Cell Communication MCQ

### 1. Biology 09 Cell Communication MCQ Questions

#### 4.1.1. What property prevents the ligands of cellsurface receptors from en...

Author: OpenStax College

What property prevents the ligands of cellsurface receptors from entering the cell?

Please choose only one answer:

- The molecules bind to the extracellular domain.
- The molecules are hydrophilic and cannot penetrate the hydrophobic interior of the plasma membrane.
- The molecules are attached to transport proteins that deliver them through the bloodstream to target cells.
- The ligands are able to penetrate the membrane and directly influence gene expression upon receptor binding.

Check the answer of this question online at [QuizOver.com](http://www.quizover.com):

Question: [What property prevents the ligands of OpenStax College Biology 09](http://www.quizover.com/question/what-property-prevents-the-ligands-of-openstax-college-biology-09?pdf=1505)

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4.1.2. The secretion of hormones by the pituitary gland is an example of \_...

Author: OpenStax College

The secretion of hormones by the pituitary gland is an example of \_\_\_\_\_.

Please choose only one answer:

- autocrine signaling
- paracrine signaling
- endocrine signaling
- direct signaling across gap junctions

Check the answer of this question online at QuizOver.com:

Question: [The secretion of hormones by the pituitary OpenStax College Biology](#)

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### 4.1.3. Why are ion channels necessary to transport ions into or out of a c...

Author: OpenStax College

Why are ion channels necessary to transport ions into or out of a cell?

Please choose only one answer:

- Ions are too large to diffuse through the membrane.
- Ions are charged particles and cannot diffuse through the hydrophobic interior of the membrane.
- Ions do not need ion channels to move through the membrane.
- Ions bind to carrier proteins in the bloodstream, which must be removed before transport into the cell.

Check the answer of this question online at QuizOver.com:

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#### 4.1.4. Endocrine signals are transmitted more slowly than paracrine signal...

Author: OpenStax College

Endocrine signals are transmitted more slowly than paracrine signals because \_\_\_\_\_.

Please choose only one answer:

- the ligands are transported through the bloodstream and travel greater distances
- the target and signaling cells are close together
- the ligands are degraded rapidly
- the ligands don't bind to carrier proteins during transport

Check the answer of this question online at QuizOver.com:

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#### 4.1.5. Where do DAG and IP3 originate?

Author: OpenStax College

Where do DAG and IP3 originate?

Please choose only one answer:

- They are formed by phosphorylation of cAMP.
- They are ligands expressed by signaling cells.
- They are hormones that diffuse through the plasma membrane to stimulate protein production.
- They are the cleavage products of the inositol phospholipid, PIP2.

Check the answer of this question online at QuizOver.com:

Question: [Where do DAG and IP3 originate OpenStax College Biology 09 Cell Quest](#)

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#### 4.1.6. What property enables the residues of the amino acids serine, threo...

Author: OpenStax College

What property enables the residues of the amino acids serine, threonine, and tyrosine to be phosphorylated?

Please choose only one answer:

- They are polar.
- They are non-polar.
- They contain a hydroxyl group.
- They occur more frequently in the amino acid sequence of signaling proteins.

Check the answer of this question online at QuizOver.com:

Question: [What property enables the residues of the OpenStax College Biology](#)

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#### 4.1.7. What is the function of a phosphatase?

Author: OpenStax College

What is the function of a phosphatase?

Please choose only one answer:

- A phosphatase removes phosphorylated amino acids from proteins.
- A phosphatase removes the phosphate group from phosphorylated amino acid residues in a protein.
- A phosphatase phosphorylates serine, threonine, and tyrosine residues.
- A phosphatase degrades second messengers in the cell.

Check the answer of this question online at QuizOver.com:

Question: [What is the function of a phosphatase OpenStax College Biology 09](#)

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#### 4.1.8. How does NF-B induce gene expression?

Author: OpenStax College

How does NF-B induce gene expression?

Please choose only one answer:

- A small, hydrophobic ligand binds to NF-B, activating it.
- Phosphorylation of the inhibitor I-B dissociates the complex between it and NF-B, and allows NF-B to enter the nucleus and stimulate transcription.
- NF-B is phosphorylated and is then free to enter the nucleus and bind DNA.
- NF-B is a kinase that phosphorylates a transcription factor that binds DNA and promotes protein production.

Check the answer of this question online at QuizOver.com:

Question: [How does NF- kappa B induce gene express OpenStax College Biology](#)

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4.1.9. Apoptosis can occur in a cell when the cell is \_\_\_\_\_.

Author: OpenStax College

Apoptosis can occur in a cell when the cell is \_\_\_\_\_.

Please choose only one answer:

- damaged
- no longer needed
- infected by a virus
- all of the above

Check the answer of this question online at QuizOver.com:

Question: [Apoptosis can occur in a cell when the OpenStax College Biology 0](#)

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#### 4.1.10. What is the effect of an inhibitor binding an enzyme?

Author: OpenStax College

What is the effect of an inhibitor binding an enzyme?

Please choose only one answer:

- The enzyme is degraded.
- The enzyme is activated.
- The enzyme is inactivated.
- The complex is transported out of the cell.

Check the answer of this question online at QuizOver.com:

Question: [What is the effect of an inhibitor binding OpenStax College Biology](#)

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#### 4.1.11. Which type of molecule acts as a signaling molecule in yeasts?

Author: OpenStax College

Which type of molecule acts as a signaling molecule in yeasts?

Please choose only one answer:

- steroid
- autoinducer
- mating factor
- second messenger

Check the answer of this question online at QuizOver.com:

Question: [Which type of molecule acts as a signaling OpenStax College Biology](#)

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4.1.12. Quorum sensing is triggered to begin when \_\_\_\_\_.

Author: OpenStax College

Quorum sensing is triggered to begin when \_\_\_\_\_.

Please choose only one answer:

- treatment with antibiotics occurs
- bacteria release growth hormones
- bacterial protein expression is switched on
- a sufficient number of bacteria are present

Check the answer of this question online at QuizOver.com:

Question: [Quorum sensing is triggered to begin when OpenStax College Biology](#)

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