

Phosphorylation of proteins and other biological molecules Control functions – 2017 Jan. Peter Kocher/Julian

Cells constantly need to adapt to changes in their
environment. They do this by changing the activity of
their proteins.

Proteins can be modified in many ways, such as
phosphorylation.

Phosphorylation is a common way to
activate or deactivate a protein.

It involves adding a phosphate group to a
protein, which can change its shape and
function.

The phosphate group is added by an enzyme called
a kinase. The reverse reaction, removing the
phosphate, is done by a phosphatase.

Phosphorylation is reversible and can be
controlled by other molecules.

It is a key mechanism for controlling
cellular processes such as metabolism, cell
growth, and signal transduction.

Phosphorylation is also involved in the regulation of
gene expression.

It can be used to activate or deactivate
enzymes.

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