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# Phosphatidylinositol 4,5-bisphosphate

National Cancer Institute

## Source

National Cancer Institute. *Phosphatidylinositol 4,5-bisphosphate*. NCI Thesaurus. Code C1192.

A phospholipid that is a component of the plasma membrane with signal transduction inducing activity. Phosphatidylinositol 4,5-bisphosphate (PIP<sub>2</sub>) is an intermediate that can be converted into either the second messenger signaling molecules, inositol 1,4,5-trisphosphate (IP<sub>3</sub>) and diacylglycerol (DAG), or phosphatidylinositol (3,4,5)-trisphosphate (PtdIns(3,4,5)P<sub>3</sub>; PIP<sub>3</sub>). Both PIP<sub>2</sub> and PIP<sub>3</sub> can act as docking phospholipids, which recruit signaling proteins to the plasma membrane and promotes the activation of several signaling cascades.