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DAG/PE-Binding Domain

National Cancer Institute

Source

National Cancer Institute. *DAG/PE-Binding Domain*. NCI Thesaurus. Code C14080.

The cysteine-rich N-terminal DAG/PE (Diacylglycerol/Phorbol Ester)-Binding (C1) Domain of PKC isoforms interacts with phorbol ester or with the phospholipid-derived second messenger diacylglycerol. C1 contains one or two copies of a Cys-rich domain about 50 amino-acid residues long; the domain binds two zinc ions, probably involving the conserved cysteines and histidines. Bound to DAG, C1 domains are involved in recruitment of proteins to the membrane via basic residues that interact with lipid head groups. Part of the domain contains two beta sheets that form a cavity and a short C-terminal alpha helix; another contains two zinc-binding sites that maintain the domain fold. Binding of diacylglycerol, or phorbol ester, to the domain results in modification of protein function. (NCI)