Abstract: Two standard dualities over a commutative ring $R$ are given by $\text{Hom}_R(-, R)$ and $\text{Hom}_R(-, D)$ where $D$ is a dualizing module. Semidualizing modules arise naturally as common generalizations of the modules $R$ and $D$, and have nontrivial applications to the understanding of ring homomorphisms of finite $G$-dimension. When $R$ is a normal domain, the isomorphism classes $[R]$ and $[D]$ are elements of the divisor class group $\text{Cl}(R)$; this extends to an inclusion $\mathcal{S}_0(R) \subseteq \text{Cl}(R)$ where $\mathcal{S}_0(R)$ is the set of isomorphism classes of semidualizing $R$-modules. We present recent advances toward an understanding of the structure of this set for certain classes of rings.