$$0 \longleftarrow \operatorname{Hom}_R(M_1, M) \xleftarrow{\ i^* \ } \operatorname{Hom}_R(M_1 \oplus M_2, M) \xleftarrow{\ \pi^* \ } \operatorname{Hom}_R(M_2, M) \longleftarrow 0$$