HKR1（Histidine kinase rhodopsin 1）即组氨酸激酶视紫红质，是一种受光调节的受体组氨酸激酶。它用质子化视网膜希夫碱 (RSB) 辅因子在紫外线吸收状态 (Rh-UV) 和蓝色吸收状态 (Rh-Bl) 之间切换，通过在 13-trans,15-anti 和 13-cis,15 混合物之间切换同分异构体实现。

除此之外，HKR1本身作为一种细胞膜表面受体，属于一种MAPKKK→MAPKK→MAPK通路的起始蛋白质，此处的MAPK是hog1蛋白，目前的研究已表明，HKR1激活hog1蛋白的途径是一种与Msb2激活hog1蛋白相对独立的途径。

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