

**Anti-PERK Antibody, clone 4F6.1 clone 4F6.1, from mouse**

Art. ID SAF-MABN842

Unit EA

**Description**

Eukaryotic translation initiation factor 2-alpha kinase 3 (EC 2.7.11.1, UniProt Q9NZJ5, also known as Eukaryotic translation initiation factor 2 alpha kinase 3, HsPEK, Pancreatic EIF2-alpha kinase, PRKR-like endoplasmic reticulum kinase) is encoded by the EIF2AK3 (also known as PEK, PERK, WRS) gene (Gene ID 9451) in human. The accumulation of unfolded or misfolded proteins in the endoplasmic reticulum (ER) induces the activation of three main unfold protein response (UPR) pathways, the inositol requiring enzyme-1 (IRE1) pathway, the activating transcription factor 6 (ATF6) pathway, and the protein kinase-like ER kinase (PERK) pathway. The PERK pathway involves PERK auto-phosphorylation/activation, resulting in PERK phosphorylation of eIF2 $\alpha$ , which in turn leads to increased ATF4 transcription and ATF4-mediated CAAT/enhancer binding protein (C/EBP) homologous protein (CHOP) upregulation.