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DATA SHEET

# Mouse Anti-PERK [B5]: MC0578, MC0578RTU7

**Intended Use:** For Research Use Only

**Description:** An interferon-inducible, RNA-dependent protein serine/threonine kinase (PKR) has been described. PKR in earlier literature is variously known as DAI, dsJ, PI kinase, p65, p67 or TIK for the mouse kinase; and p68 or p69 for the human kinase. The PKR kinase substrate is the α subunit of protein synthesis initiation factor eIF-2. Phosphorylation of eIF-2α on serine-51 results in inhibition of translation. The serine/threonine kinase catalytic domains map to the carboxy terminal half of the protein while the RNA-binding domains are located in the amino terminal region. PERK is a type I transmembrane protein located in the endoplasmic reticulum that contains a kinase domain similar to the kinase domain of PKR. PERK is activated in response to ER stress and phosphorylates eIF-2α, thus inhibiting the translation of mRNA.

**Specifications:**

| | |
|---|---|
| Clone: | B5 |
| Source: | Mouse |
| Isotype: | IgG1k |
| Reactivity: | Human, mouse, rat |
| Immunogen: | Human PERK protein N-terminus aa21-320 |
| Localization: | Cytoplasm |
| Formulation: | Antibody in PBS pH7.4, containing BSA and ≤ 0.09% sodium azide (NaN3) |
| Storage: | Store at 2°- 8°C |
| Applications: | IHC, ELISA, IF, IP, WB |

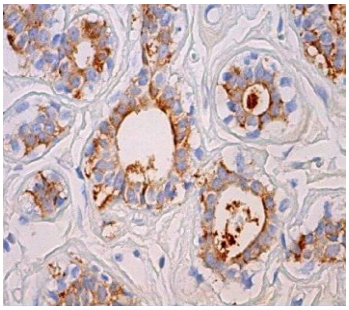
Package:

| Description | Catalog No. | Size |
|---|---|---|
| PERK [B5] Concentrated | MC0578 | 1 ml |
| PERK [B5] Prediluted | MC0578RTU7 | 7 ml |

**IHC Procedure*:**

| | |
|---|---|
| Positive Control Tissue: | Breast, colon carcinoma, stomach, kidney |
| Concentrated Dilution: | 50-200 |
| Pretreatment: | Tris EDTA pH9.0, 15 minutes Pressure Cooker or 30-60 minutes water bath at 95°-99°C |
| Incubation Time and Temp: | 30-60 minutes @ RT |
| Detection: | Refer to the detection system manual |

* Result should be confirmed by an established diagnostic procedure.



FFPE human breast stained with anti-PERK using DAB

**References:**


1. An IgM monoclonal antibody against domain 1 of CD147 induces non-canonical RIPK-independent necroptosis in a cell type specific hepatocellular carcinoma. | Pomlok, K. et al. Biochim Biophys Acta Mol Cell Res. 119295, 2022.
2. A 584 bp deletion in CTRB2 inhibits chymotrypsin B2 activity and secretion and confers risk of pancreatic cancer. | Jermusyk, A. et al. Am J Hum Genet. 2021.
3. The miR-27a-calreticulin axis affects drug-induced immunogenic cell death in human colorectal cancer cells. | Colangelo, T. et al. Cell Death Dis. 7: e2108, 2016.





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