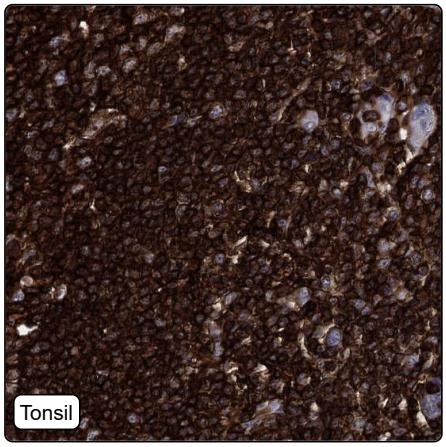
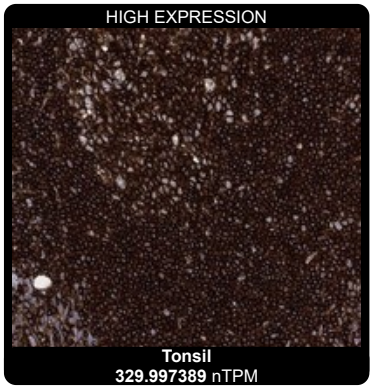
# CPTC-PTPRC-2 (CAB080251)

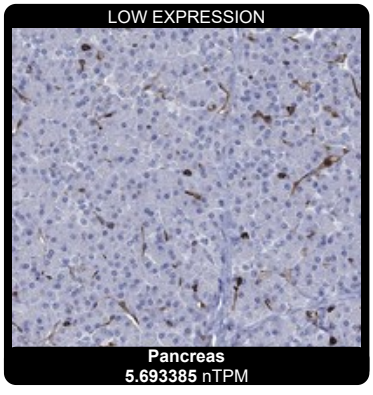
**Uniprot ID**: P08575
**Protein name**: PTPRC_HUMAN
**Full name**: Receptor-type tyrosine-protein phosphatase C
**Tissue specificity**: Isoform 1: Detected in thymocytes. Isoform 2: Detected in thymocytes. Isoform 3: Detected in thymocytes. Isoform 4: Not detected in thymocytes. Isoform 5: Detected in thymocytes. Isoform 6: Not detected in thymocytes. Isoform 7: Detected in thymocytes. Isoform 8: Not detected in thymocytes.
**Function**: Protein tyrosine-protein phosphatase required for T-cell activation through the antigen receptor. Acts as a positive regulator of T-cell coactivation upon binding to DPP4. The first PTPase domain has enzymatic activity, while the second one seems to affect the substrate specificity of the first one. Upon T-cell activation, recruits and dephosphorylates SKAP1 and FYN. Dephosphorylates LYN, and thereby modulates LYN activity (By similarity). (Microbial infection) Acts as a receptor for human cytomegalovirus protein UL11 and mediates binding of UL11 to T-cells, leading to reduced induction of tyrosine phosphorylation of multiple signaling proteins upon T-cell receptor stimulation and impaired T-cell proliferation.
**Subcellular location**:
Cell membrane (*experimental evidence*) (Topo: Single-pass type I membrane protein (*match to sequence model*))
Membrane raft (*experimental evidence*)
*NOTE*: Colocalized with DPP4 in membrane rafts.
**Protein existence**: Experimental evidence at protein level

**Comment:**

## Immunohistochemistry




| | |
|---|---|
| **IHC protocol:** | HIER pH6, Dilution 1:1000 |
| **IHC test staining:** | Cytoplasmic positivity in immune cells. |
| **Literature conformance:** | Consistent with extensive gene/protein characterization data |
| **Literature significance:** | |
| **RNA similarity:** | High consistency between antibody staining and RNA expression data |
| **RNA tissue specificity:** | Tissue enhanced (bone marrow,lymphoid tissue) |
| **RNA tissue distribution:** | Detected in all |
| **IHC Sibling similarity:** | Other antibody shows similar IHC staining pattern |
| **Reliability score:** | Supported |
| **APE summary:** | Selective cytoplasmic expression in lymphoid tissue and immune cells. |
| **APE explanatory sentences:** | Medium consistency between antibody staining and RNA expression data. Antibody staining in cells/structures not annotated, view images. |
| **Orthogonal validation:** | Yes |
| **Independent validation:** | No |
| **IHC Annotation summary:** | Strong cytoplasmic and membranous positivity was observed in immune cells. Additional positivity in microglia in CNS.<br><br>Strong cytoplasmic and membranous positivity was observed in most lymphomas. |