

# Immunotag™ PTEN Antibody

| Antibody Specification |                                                                                                                                                                                                                                                                                                                                                                   |
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| Catalog No.            | ITA6914                                                                                                                                                                                                                                                                                                                                                           |
| Product Description    | Immunotag™ PTEN Antibody                                                                                                                                                                                                                                                                                                                                          |
| Size                   | 100 µg, 200 µg                                                                                                                                                                                                                                                                                                                                                    |
| Conjugation            | HRP, Biotin, FITC, Alexa Fluor® 350, Alexa Fluor® 405, Alexa Fluor® 488, Alexa Fluor® 555, Alexa Fluor® 594, Alexa Fluor® 647                                                                                                                                                                                                                                     |
| IMPORTANT NOTE         | This product is custom manufactured with a lead time of 3-4 weeks. Once in production, this item cannot be cancelled from an order and is not eligible for return.                                                                                                                                                                                                |
| Target Protein         | PTEN                                                                                                                                                                                                                                                                                                                                                              |
| Clonality              | Polyclonal                                                                                                                                                                                                                                                                                                                                                        |
| Storage/Stability      | -20°C/1 year                                                                                                                                                                                                                                                                                                                                                      |
| Application            | WB,IHC,ELISA                                                                                                                                                                                                                                                                                                                                                      |
| Recommended Dilution   | WB 1:500-1:2000 IHC 1:50-1:200                                                                                                                                                                                                                                                                                                                                    |
| Concentration          | 1 mg/ml                                                                                                                                                                                                                                                                                                                                                           |
| Reactive Species       | Human,Mouse,Rat                                                                                                                                                                                                                                                                                                                                                   |
| Host Species           | Rabbit                                                                                                                                                                                                                                                                                                                                                            |
| Immunogen              | A synthesized peptide derived from human PTEN                                                                                                                                                                                                                                                                                                                     |
| Specificity            | PTEN Antibody detects endogenous levels of total PTEN                                                                                                                                                                                                                                                                                                             |
| Purification           | The antiserum was purified by peptide affinity chromatography.                                                                                                                                                                                                                                                                                                    |
| Form                   | Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.Store at -20 °C.Stable for 12 months from date of receipt                                                                                                                                                                                                       |
| Gene Name              | PTEN                                                                                                                                                                                                                                                                                                                                                              |
| Accession No.          | P60484                                                                                                                                                                                                                                                                                                                                                            |
| Alternate Names        | 10q23del; BZS; DEC; GLM2; MGC11227; MHAM; MMAC1; MMAC1 phosphatase and tensin homolog deleted on chromosome 10; Mutated in multiple advanced cancers 1; Phosphatase and tensin homolog; Phosphatase and tensin like protein; Phosphatidylinositol 3,4,5-trisphosphate 3-phosphatase and dual-specificity protein phosphatase PTEN; Pten; PTEN_HUMAN; PTEN1; TEP1; |

## Antibody Specification

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| Description               | <p>Tumor suppressor. Acts as a dual-specificity protein phosphatase, dephosphorylating tyrosine-, serine- and threonine-phosphorylated proteins. Also acts as a lipid phosphatase, removing the phosphate in the D3 position of the inositol ring from phosphatidylinositol 3,4,5-trisphosphate, phosphatidylinositol 3,4-diphosphate, phosphatidylinositol 3-phosphate and inositol 1,3,4,5-tetrakisphosphate with order of substrate preference in vitro <math>\text{PtdIns}(3,4,5)\text{P}_3 &gt; \text{PtdIns}(3,4)\text{P}_2 &gt; \text{PtdIns}3\text{P} &gt; \text{Ins}(1,3,4,5)\text{P}_4</math> (PubMed:26504226). The lipid phosphatase activity is critical for its tumor suppressor function. Antagonizes the PI3K-AKT/PKB signaling pathway by dephosphorylating phosphoinositides and thereby modulating cell cycle progression and cell survival. The unphosphorylated form cooperates with AIP1 to suppress AKT1 activation. Dephosphorylates tyrosine-phosphorylated focal adhesion kinase and inhibits cell migration and integrin-mediated cell spreading and focal adhesion formation. Plays a role as a key modulator of the AKT-mTOR signaling pathway controlling the tempo of the process of newborn neurons integration during adult neurogenesis, including correct neuron positioning, dendritic development and synapse formation. May be a negative regulator of insulin signaling and glucose metabolism in adipose tissue. The nuclear monoubiquitinated form possesses greater apoptotic potential, whereas the cytoplasmic nonubiquitinated form induces less tumor suppressive ability. In motile cells, suppresses the formation of lateral pseudopods and thereby promotes cell polarization and directed movement.</p> |
| Cell Pathway/<br>Category | Primary Polyclonal Antibody                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Protein MW                | 47kDa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Usage                     | For Research Use Only! Not for diagnostic or therapeutic procedures.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |