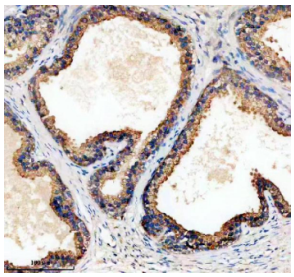
# TPD52 Antibody / Tumor Protein D52 Polyclonal Antibody (FY12524)

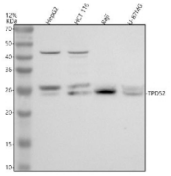
| Catalog No. | Formulation | Size |
|---|---|---|
| FY12524 | Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml | 100 ug |

**Bulk quote request**

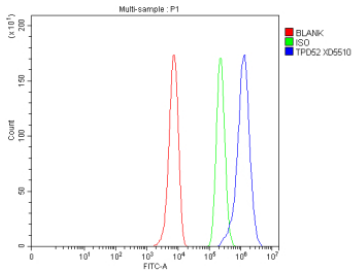
| | |
|---|---|
| **Species Reactivity** | Human |
| **Format** | Lyophilized |
| **Host** | Rabbit |
| **Clonality** | Polyclonal (rabbit origin) |
| **Isotype** | Rabbit IgG |
| **Purity** | Immunogen affinity purified |
| **Buffer** | Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4. |
| **UniProt** | P55327 |
| **Localization** | Cytoplasm |
| **Applications** | Western Blot: 0.25-0.5ug/ml<br>Immunohistochemistry: 2-5ug/ml<br>Flow cytometry: 1-3ug/million cells<br>ELISA: 0.1-0.5ug/ml |
| **Limitations** | This TPD52 Antibody / Tumor Protein D52 Polyclonal Antibody is available for research use only. |



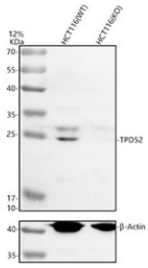
TPD52 Antibody IHC Staining of Human Prostate Cancer Tissue. Immunohistochemical analysis of FFPE human prostate cancer tissue using Tumor Protein D52 Polyclonal Antibody at 2 ug/ml. Brown DAB staining is visible in glandular epithelial cells, with prominent cytoplasmic and peripheral cellular immunoreactivity surrounding glandular lumens. Heat-induced epitope retrieval was performed using pH 8 EDTA buffer, followed by overnight primary antibody incubation at 4Â°C.



TPD52 Antibody Western Blot Analysis of HepG2, HCT116, Raji and U-87 MG Cells. Western blot analysis using Tumor Protein D52 Polyclonal Antibody at 0.5 ug/ml. Lane 1: human HepG2 cells; lane 2: human HCT116 cells; lane 3: human Raji cells; lane 4: human U-87 MG cells. Immunoreactive bands are detected at approximately 25-28 kDa, near the predicted TPD52 molecular weight of 25 kDa. Multiple closely migrating bands are visible in some samples. TPD52 phosphorylation and alternative isoforms have been documented, although the individual bands have not been experimentally assigned to specific modified forms or isoforms.




TPD52 Antibody Flow Cytometry Analysis of Human HepG2 Cells. Flow cytometric analysis of fixed and permeabilized human HepG2 cells using Tumor Protein D52 Polyclonal Antibody at 1 ug per million cells. The red histogram represents unstained cells, the green histogram represents the rabbit IgG isotype control, and the blue histogram represents antibody-stained cells. The rightward shift of the blue population relative to both controls indicates detectable intracellular TPD52 immunoreactivity.




TPD52 Antibody Western Blot Validation in HCT116 Wild-Type and TPD52 Knockout Cells. Western blot analysis of human HCT116 wild-type (WT, lane 1) and TPD52 knockout (KO, lane 2) whole-cell lysates using Tumor Protein D52 Polyclonal Antibody at 0.5 ug/ml. Each lane contains 30 ug of total protein under reducing conditions. Immunoreactive bands at approximately 23-27 kDa are detected in WT lysate and are substantially reduced in the KO sample, supporting antibody specificity for TPD52. Beta-Actin serves as the loading control.

## Description

TPD52 Antibody / Tumor Protein D52 Polyclonal Antibody targets tumor protein D52 (TPD52), a small cytoplasmic protein involved in intracellular vesicle trafficking, membrane organization, and cellular growth regulation. TPD52 belongs to a conserved protein family that includes TPD52L1 and TPD52L2, whose members share structural features associated with protein interactions and intracellular transport. Originally identified through studies of gene amplification and overexpression in breast cancer, TPD52 has subsequently been investigated in multiple malignancies and cellular processes involving membrane trafficking, secretion, and proliferation. Its biological activities are influenced by interactions with related family members and proteins associated with intracellular membrane compartments.

TPD52 contains a conserved coiled-coil domain that supports the formation of homomeric and heteromeric complexes with other D52 family proteins. These interactions contribute to its association with vesicular transport machinery and membrane-associated regulatory proteins. TPD52 has been implicated in calcium-dependent secretory processes, including the regulation of vesicle movement and membrane fusion. Its intracellular distribution can change in response to cellular activity, reflecting its participation in dynamic transport events. The protein also interacts with components involved in secretory granule organization, linking its structural properties to the regulation of intracellular membrane trafficking.

Beyond vesicle transport, TPD52 participates in pathways associated with cell proliferation, survival, and migration. Increased expression has been documented in several cancers, including breast, prostate, and ovarian malignancies. Gene amplification contributes to elevated TPD52 expression in certain tumors, while transcriptional and post-transcriptional mechanisms may influence its abundance in other contexts. Experimental studies have associated altered TPD52 expression with changes in cellular growth and tumor-associated behavior, although its effects vary according to cellular environment and interactions with other regulatory proteins. Its involvement in intracellular transport may also influence signaling processes associated with cellular adaptation.

The relationship between TPD52 expression, vesicular trafficking, and proliferative signaling makes this protein relevant to studies of cancer biology and cellular organization. Its interactions with related D52 family members provide additional opportunities to investigate the molecular regulation of membrane-associated processes. Research using TPD52 Antibody can help characterize tumor protein D52 expression and its relationship to intracellular transport, secretory activity, and cancer-associated changes in cellular behavior.

Explore our selection of Cancer Antibodies for investigating tumor-associated proteins, cell proliferation, and molecular mechanisms involved in cancer progression.

## Application Notes

Optimal dilution of the TPD52 Antibody / Tumor Protein D52 Polyclonal Antibody should be determined by the researcher.

## Immunogen

E.coli-derived human TPD52 recombinant protein (Position: M1-L224) was used as the immunogen for the TPD52 antibody.

## Storage

After reconstitution, the TPD52 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

## Alternate Names

Tumor protein D52 antibody, D52 protein antibody, TPD52 protein antibody, Tumor protein D52 isoform antibody, D52 family protein antibody, Tumor-associated protein D52 antibody, TPD52 cytoplasmic protein antibody, TPD52 vesicle-associated protein antibody, TPD52 secretory protein antibody, Tumor protein D52 family antibody


Copyright © NSJ Bioreagents. All rights reserved.