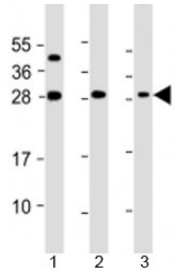
TPD52 Rabbit Polyclonal Antibody / Tumor protein D52 (F53990)

Catalog No.	Formulation	Size
F53990-0.2ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.2 ml
F53990-0.05ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.05 ml

Bulk quote request

Species Reactivity	Human, Mouse
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity
UniProt	P55327
Applications	Western blot: 1:1000-2000
Limitations	This TPD52 Rabbit Polyclonal Antibody is available for research use only.



TPD52 Rabbit Polyclonal Antibody WB Analysis. Western blot testing of 1) mouse brain, 2) mouse kidney and 3) human ThP-1 cell lysate with TPD52 antibody at 1:2000. Expected molecular weight: 24~26 kDa.

Description

TPD52 Rabbit Polyclonal Antibody targets tumor protein D52 (TPD52), a small cytoplasmic protein involved in intracellular membrane trafficking, vesicle transport, and cellular growth regulation. TPD52 belongs to a conserved protein family that includes TPD52L1, TPD52L2, and TPD52L3, whose members share structural features associated with protein interactions and membrane dynamics. Originally identified through studies of gene amplification and overexpression in breast cancer, TPD52 has subsequently been investigated in numerous biological processes involving secretion, proliferation, and intracellular transport. Its functions are influenced by interactions with related family members and proteins associated with specialized 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 participation in vesicular transport and membrane-associated regulatory processes. TPD52 localizes to several intracellular compartments, including the Golgi apparatus, endosomes, and secretory vesicles. It interacts with proteins such as annexin A6, MAL2, and Rab5c, linking its activity to calcium-dependent secretion and endosomal trafficking. These associations help coordinate membrane transport with changes in cellular activity and secretory requirements.

Beyond membrane trafficking, TPD52 participates in pathways regulating cellular proliferation, survival, and metabolism. Increased expression has been documented in several malignancies, including breast, prostate, and ovarian cancers. Gene amplification contributes to elevated TPD52 abundance in certain tumors, while additional regulatory mechanisms influence its expression in other contexts. Experimental studies have demonstrated interactions between TPD52 and AMP-activated protein kinase (AMPK), suggesting a role in cellular energy regulation. Altered TPD52 expression has also been associated with changes in cell migration, growth signaling, and tumor-associated behavior, although these effects depend on cellular context.

The relationship between TPD52 expression, intracellular transport, and metabolic signaling highlights its importance in cellular organization and cancer biology. Its interactions with vesicle-associated proteins provide a connection between membrane dynamics and mechanisms controlling cellular proliferation. Research involving TPD52 Rabbit Polyclonal Antibody can help characterize the distribution and regulation of tumor protein D52, particularly its involvement in secretory pathways, intracellular trafficking, and cancer-associated changes in cellular physiology.

For additional research options, explore our TPD52 Antibody, a rabbit polyclonal reagent with Western blot, IHC, flow cytometry, and knockout validation data.

Application Notes

Titration of the TPD52 Rabbit Polyclonal Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A portion of amino acids 11-44 from the human protein was used as the immunogen for the TPD52 antibody.

Storage

Aliquot the TPD52 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

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