

Datasheet for 600-401-988**Tamalin Antibody****Overview**

Description:	Anti-Tamalin (RABBIT) Antibody - 600-401-988
Item No.:	600-401-988
Size:	100 µg
Applications:	ELISA, WB, IP
Reactivity:	Human, Mouse
Host Species:	Rabbit

Product Details

Background:	This antibody is designed, produced, and validated as part of a collaboration between Rockland and the National Cancer Institute (NCI) and is suitable for Cancer, Immunology and Nuclear Signaling research. Tamalin, also named General receptor for phosphoinositides 1-associated scaffold protein (GRASP) is a PDZ (post-synaptic density protein/Drosophila disc large tumor suppressor/zo-1) domain-containing protein that interacts with group 1 metabotropic glutamate receptors (mGluRs). The PDZ domain-containing amino-terminal half of Tamalin binds directly to the class I PDZ-binding motif of group 1 mGluRs. The carboxyl-terminal half of Tamalin binds to cytohesins, which are guanine nucleotide exchange factors (GEFs) specific for the ADP-ribosylation factor (ARF) family of small GTP-binding proteins. Tamalin forms a protein complex with group 1 mGluRs at the post-synaptic site of specific neuronal cells and serves as a key scaffold protein that links a complex formation between mGluR1a and cytohesins. It is reported that Tamalin plays a key role in the association of group 1 mGluRs with the ARF-specific GEF proteins and contributes to intracellular trafficking and the macromolecular organization of group 1 mGluRs at synapses.
Synonyms:	rabbit anti-Tamalin antibody, rabbit anti-Grasp antibody, GRASP 1 antibody, GRP1-associated scaffold protein, GRIP associated protein 1 antibody, GRIP1 associated protein 1 antibody, GRIPAP 1 antibody, General receptor for phosphoinositides 1-associated scaffold protein
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	Grasp
Reactivity:	Human, Mouse
Immunogen Type:	Conjugated Peptide
Immunogen:	This affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to amino acids near the amino terminus of mouse Tamalin protein.
Purity/Specificity:	This affinity purified antibody is directed against mouse Tamalin protein. The product was affinity purified from monospecific antiserum by immunoaffinity chromatography. A BLAST analysis was used to suggest cross-reactivity with Tamalin protein from rat based on a 94% homology with the immunizing sequence. Reactivity against homologues from other sources is not known.
Relevant Links:	• UniProtKB - Q9JJA9 • NCBI - 103472019 • GenelD - 56149

Application Details

Tested Applications:	ELISA, WB
Suggested Applications:	IP (Based on references)
Application Note:	This affinity purified antibody has been tested for use in ELISA, western blotting, and immunoprecipitation. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 42 kDa in size corresponding to Tamalin protein by western blotting in the appropriate cell lysate or extract.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:4,000 - 1:20,000
IP:	1µg
WB:	1:500 - 1:3,000

Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	1.03 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide

Stabilizer: None

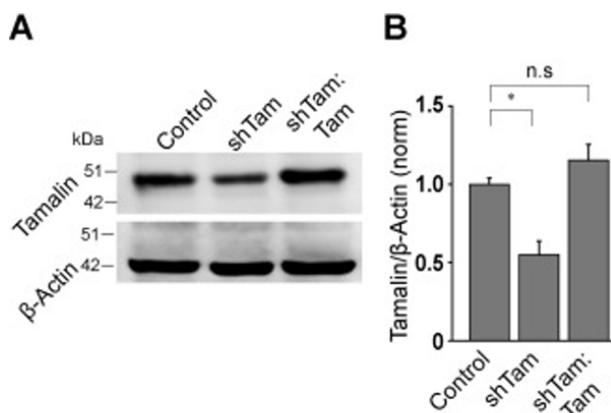
Shipping & Handling

Shipping Condition: Dry Ice

Storage Condition: Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

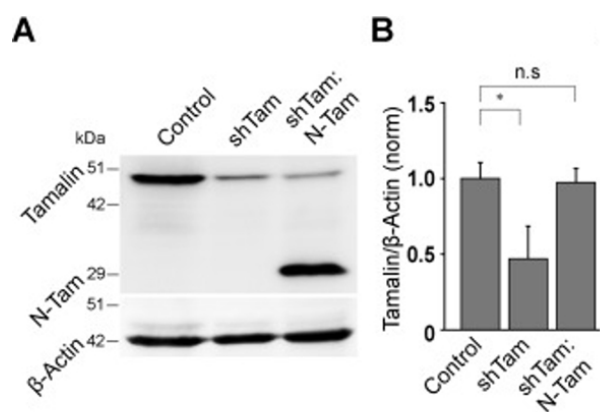
Expiration: Expiration date is one (1) year from date of receipt.

Images



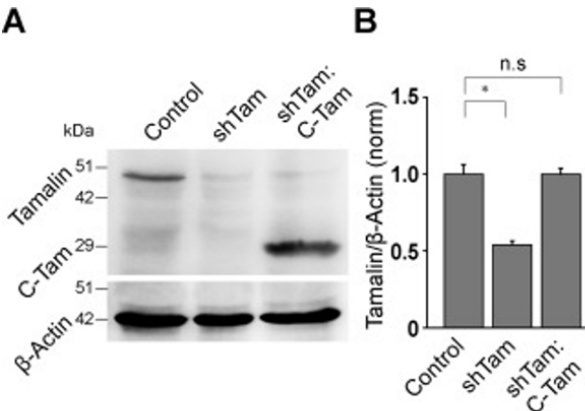
Western Blot

Knockdown of endogenous tamalin inhibits the ligand-mediated endocytosis of mGluR1. A and B, Western blotting (A) and quantitation of the Western blots (B), showing the efficient knock-down of endogenous tamalin by shTam and replacement of the endogenous tamalin with full-length tamalin. Fig 1. PMID: 32376687



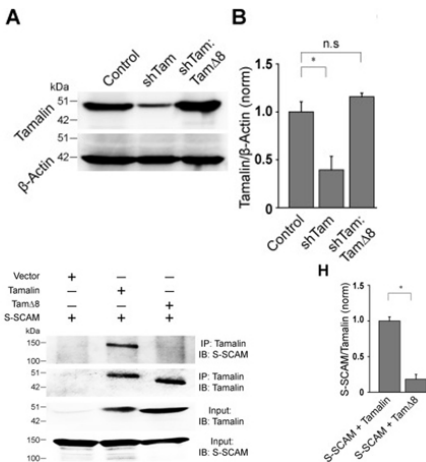
Western Blot

N-terminal domain of tamalin alone is not sufficient for the ligand-mediated endocytosis of mGluR1. A and B, Western blotting (A) and quantitation of the Western blots (B), showing the effective knockdown of endogenous tamalin by shTam and expression of the N-Tam replacement construct. Fig 2. PMID: 32376687



Western Blot

The C-terminal domain of tamalin alone is not sufficient for the ligand-mediated endocytosis of mGluR1. A and B, Acute knockdown of endogenous tamalin and replacement of endogenous tamalin with C-Tam, as shown by Western blotting (A) and quantitation of the Western blots (B). Fig 3. PMID: 32376687

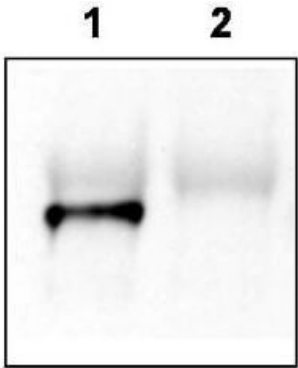


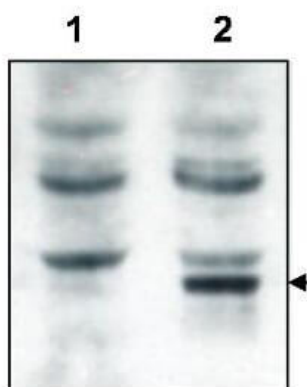
Western Blot

The last 8 amino acids of tamalin play a critical role in the ligand-mediated internalization of mGluR1. A and B, Western blotting (A) and quantitation of the Western blots (B), showing the knockdown of the endogenous tamalin by shTam and expression of the TamΔ8 replacement construct. G, Coimmunoprecipitation assays demonstrated that deletion of the last 8 amino acids of tamalin disrupted binding of S-SCAM to tamalin. H, Quantitation of the coimmunoprecipitation assays. Fig 4. PMID: 32376687

Western Blot

Mouse brain lysate was immunoprecipitated with anti-Tamalin antiserum. A blot was prepared and probed with affinity purified anti-Tamalin. Lane 1 is wild-type brain lysate; Lane 2 is Tamalin knock-out brain lysate. The membrane was probed with the primary antibody at a 1:1,000 dilution. Personal Communication, V. Coppola, CCR-NCI, Frederick, MD.





Western Blot

Western blot using Rockland's affinity purified anti-Tamalin to detect over-expressed Tamalin in HEK293 cells (lane 2, arrowhead). Lane 1 shows the non-transfected control. Cell extracts were electrophoresed and transferred to nitrocellulose. The membrane was probed with the primary antibody at a 1:2,000 dilution. Personal Communication, V. Coppola, CCR-NCI, Frederick, MD.

References

- Pandey S, Ramsakha N, Sharma R, et al. The post-synaptic scaffolding protein Tamalin regulates ligand-mediated trafficking of metabotropic glutamate receptors. *J Biol Chem.* (2020)

Disclaimer

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