Datasheet for 600-401-A89S

Pogz Antibody

Overview

Description:	Anti-Pogz (RABBIT) Antibody - 600-401-A89S
Item No.:	600-401-A89S
Size:	25 µL
Applications:	ELISA, WB, ChIP, IP
Reactivity:	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. Pogz is a zinc-finger protein containing at least 8 C2H2 zinc fingers, a CENP-B (centromere protein-B) domain, and a DDE domain found in the bacterial transposase/retroviral integrase family. Members of this family of integrases share structural homologies and show similar catalytic activity to the RAG1 and RAG2 proteins that initiate V(D)J recombination in lymphoid progenitors. Mouse Pogz has a human homolog with a base pair similarity of 90% and amino acid similarity of 93% for the full length protein. In humans at least 3 variants have been predicted and they are all similar at the N-terminus. A number of expressed sequence tags (ESTs) cloned from murine undifferentiated ES cells and Lin-/c-Kit+/Sca-1+ hematopoietic stem cell cDNA libraries correspond to the Pogz gene, further underlining an important function for this gene in stem cells. In mice, deletion of the gene in all tissues early in embryogenesis has been shown to be lethal.
Synonyms:	rabbit anti-POGZ antibody, pogo transposable element with ZNF domain antibody, Suppressor of hairy wing homolog 5, Zinc finger protein 280E, Zinc finger protein 635, SUHW5, ZNF280E, ZNF635
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	Pogz

Reactivity:	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 a region near the N-terminus of mouse Pogz protein.
Purity/Specificity:	This product was affinity purified from monospecific antiserum by immunoaffinity chromatography. This antibody is known to react with mouse Pogz protein. A BLAST analysis was used to suggest cross-reactivity with Pogz from human, dog, short-tailed opossum, cattle, rat, chimpanzee, macaque, olive baboon, and chicken sources based on 100% homology with the immunizing sequence. Reactivity with Pogz from other sources has not been determined.
Relevant Links:	• UniProtKB - Q8BZH4 • NCBI - Q8BZH4.2 • GeneID - 229584

Application Details

Tested Applications:	ELISA, WB
Suggested Applications:	ChIP, IP (Based on references)
Application Note:	This affinity purified antibody has been tested for use in ELISA and western blotting. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 155 kDa in size corresponding to Pogz 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:	1:150,000
WB:	1:3,000

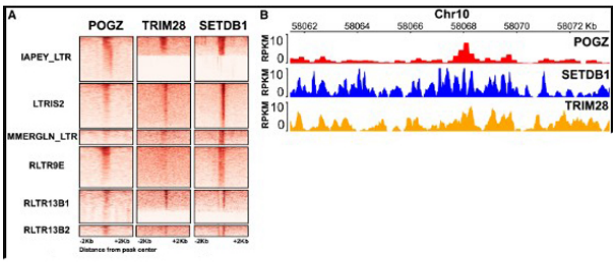
Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	1.6 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

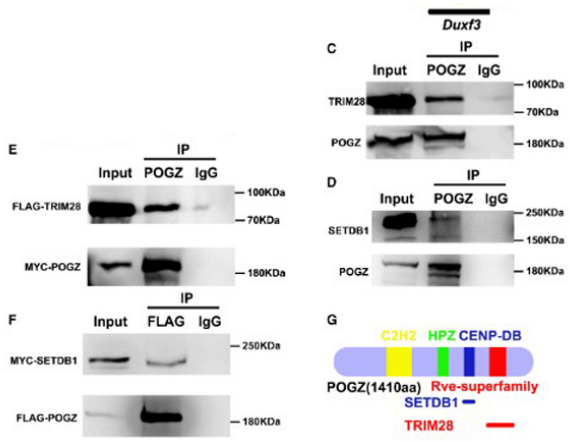
Shipping & Handling

Shipping Condition:	Dry Ice
Storage Condition:	Store vial at -20° C or below prior to opening. This vial contains a relatively low volume of reagent (25 µL). To minimize loss of volume dilute 1:10 by adding 225 µL of the buffer stated above directly to the vial. Recap, mix thoroughly and briefly centrifuge to collect the volume at the bottom of the vial. Use this intermediate dilution when calculating final dilutions as recommended below. Store the vial at -20°C or below after dilution. Avoid cycles of freezing and thawing.
Expiration:	Expiration date is three (3) months from date of receipt.

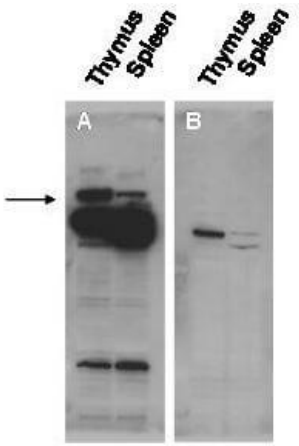
Images



ChIP
(A) Heatmap of ChIP-seq data showing the enrichment of POGZ, SETDB1, and TRIM28 on the indicated ERVs in control and Pogz−/− ESCs.
(B) Genomic view of ChIP-seq data for POGZ, SETDB1, and TRIM28 on the Dux locus. Fig 6. PMID: 37494184



Immunoprecipitation
(C) IP images showing that endogenous POGZ pulled down TRIM28 in ESCs (n = 3 repeats).
(D) IP images showing that POGZ pulled down SETDB1 in ESCs (n = 3).
(E) coIP images showing that FLAG-POGZ interacts with MYC-TRIM28 (n = 3).
(F) coIP images showing that FLAG-POGZ interacts with MYC-SETDB1 (n = 3). Fig 6. PMID: 37494184



Western Blot
Western blot using Rockland's affinity purified anti-Pogz antibody shows detection of Pogz protein ~155kDa (arrowhead) in adult mouse thymus and spleen tissue lysate (Panel A). The lower molecular weight bands may be cross reactive proteins. Pre-incubation of antibody with the immunizing peptide blocks specific antibody reactivity (Panel B). Primary antibody was used at 1:20,000. Personal Communication, K.O. Gudmundsson and J. Keller, NCI, Frederick, MD.

References

- Sun X et al. POGZ suppresses 2C transcriptional program and retrotransposable elements. *Cell Rep.* (2023)

Disclaimer