

### Goat Anti-GNIP / TRIM7 Antibody

Peptide-affinity purified goat antibody Catalog # AF1487a

#### Specification

### Goat Anti-GNIP / TRIM7 Antibody - Product Information

Application Primary Accession Other Accession Reactivity Host Clonality Concentration Isotype Calculated MW WB, IHC <u>Q9C029</u> <u>NP\_203128</u>, <u>81786</u> Human Goat Polyclonal 100ug/200ul IgG 56631

#### Goat Anti-GNIP / TRIM7 Antibody - Additional Information

Gene ID 81786

**Other Names** Tripartite motif-containing protein 7, Glycogenin-interacting protein, RING finger protein 90, TRIM7, GNIP, RNF90

Format

0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

**Storage** Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions** Goat Anti-GNIP / TRIM7 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

#### Goat Anti-GNIP / TRIM7 Antibody - Protein Information

Name TRIM7

Synonyms GNIP, RNF90

Function

E3 ubiquitin-protein ligase that have both tumor-promoting and tumor-suppressing activities and functions in several biological processes including innate immunity, regulation of ferroptosis as well as cell proliferation and migration (PubMed:<a

href="http://www.uniprot.org/citations/25851810" target="\_blank">25851810</a>, PubMed:<a



href="http://www.uniprot.org/citations/32853985" target=" blank">32853985</a>, PubMed:<a href="http://www.uniprot.org/citations/34062120" target=" blank">34062120</a>). Acts as an antiviral effector against multiple viruses by targeting specific viral proteins for ubiguitination and degradation including norovirus NTPase protein or SARS-CoV-2 NSP5 and NSP8 proteins (PubMed:<a href="http://www.uniprot.org/citations/34062120" target=" blank">34062120</a>, PubMed:<a href="http://www.uniprot.org/citations/35982226" target=" blank">35982226</a>). Mechanistically, recognizes the C-terminal glutamine-containing motif usually generated by viral proteases that process the polyproteins and trigger their ubiquitination and subsequent degradation (PubMed:<a href="http://www.uniprot.org/citations/35982226" target=" blank">35982226</a>, PubMed:<a href="http://www.uniprot.org/citations/35867826" target=" blank">35867826</a>, PubMed:<a href="http://www.uniprot.org/citations/35893676" target=" blank">35893676</a>). Mediates 'Lys-63'-linked polyubiguitination and stabilization of the JUN coactivator RNF187 in response to growth factor signaling via the MEK/ERK pathway, thereby regulating JUN transactivation and cellular proliferation (PubMed:<a href="http://www.uniprot.org/citations/25851810" target=" blank">25851810</a>). Promotes the TLR4-mediated signaling activation through its E3 ligase domain leading to production of pro-inflammatory cytokines and type I interferon (By similarity). Also plays a negative role in the regulation of exogenous cytosolic DNA virus-triggered immune response. Mechanistically, enhances the 'Lys-48'-linked ubiquitination of STING1 leading to its proteasome-dependent degradation (PubMed:<a href="http://www.uniprot.org/citations/32126128" target=" blank">32126128</a>). Mediates the ubiquitination of the SIN3- HDAC chromatin remodeling complex component BRMS1 (PubMed:<a href="http://www.uniprot.org/citations/32853985" target=" blank">32853985</a>). Modulates NCOA4-mediated ferritinophagy and ferroptosis in glioblastoma cells by ubiguitinating NCOA4, leading to its degradation (PubMed:<a href="http://www.uniprot.org/citations/36067704"

target=" blank">36067704</a>).

**Cellular Location** Nucleus. Cytoplasm. Golgi apparatus

#### **Tissue Location**

Skeletal muscle and placenta, at lower levels in heart, brain and pancreas. Isoform 1 is widely expressed with high level in testis, kidney and heart.

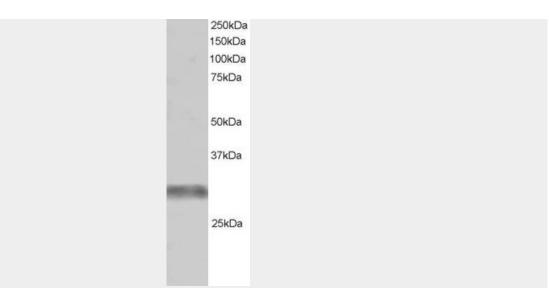
# Goat Anti-GNIP / TRIM7 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

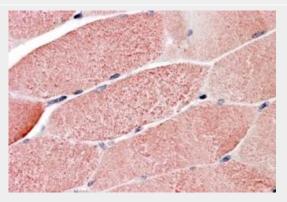
- <u>Western Blot</u>
- Blocking Peptides
- <u>Dot Blot</u>
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- <u>Cell Culture</u>

Goat Anti-GNIP / TRIM7 Antibody - Images





AF1487a (1  $\mu$ g/ml) staining of Human Skeletal Muscle lysate (RIPA buffer, 30  $\mu$ g total protein per lane). Primary incubated for 1 hour. Detected by western blot using chemiluminescence.



AF1487a (3.8  $\mu$ g/ml) staining of paraffin embedded Human Skeletal Muscle. Steamed antigen retrieval with citrate buffer pH 6, AP-staining.

# Goat Anti-GNIP / TRIM7 Antibody - Background

The protein encoded by this gene is a member of the tripartite motif (TRIM) family. The TRIM motif includes three zinc-binding domains, a RING, a B-box type 1, a B-box type 2, and a coiled-coil region. The protein localizes to both the nucleus and the cytoplasm, and may represent a participant in the initiation of glycogen synthesis. Multiple transcript variants have been found for this gene, and some of them encode the same isoform.

#### Goat Anti-GNIP / TRIM7 Antibody - References

The status, quality, and expansion of the NIH full-length cDNA project: the Mammalian Gene Collection (MGC). Gerhard DS, et al. Genome Res, 2004 Oct. PMID 15489334.

Structure-function analysis of GNIP, the glycogenin-interacting protein. Zhai L, et al. Arch Biochem Biophys, 2004 Jan 15. PMID 14984203.

Complete sequencing and characterization of 21,243 full-length human cDNAs. Ota T, et al. Nat Genet, 2004 Jan. PMID 14702039.

Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences. Strausberg RL, et al. Proc Natl Acad Sci U S A, 2002 Dec 24. PMID 12477932.

GNIP, a novel protein that binds and activates glycogenin, the self-glucosylating initiator of glycogen biosynthesis. Skurat AV, et al. J Biol Chem, 2002 May 31. PMID 11916970.