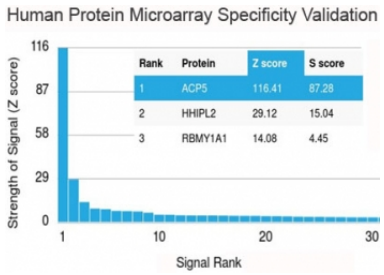
# Recombinant TRAcP Antibody / TRAP / ACP5 [clone rACP5/1070] (V3535)

| Catalog No. | Formulation | Size |
|---|---|---|
| V3535-100UG | 0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide | 100 ug |
| V3535-20UG | 0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide | 20 ug |
| V3535SAF-100UG | 1 mg/ml in 1X PBS; BSA free, sodium azide free | 100 ug |
| V3535IHC-7ML | Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only* | 7 ml |

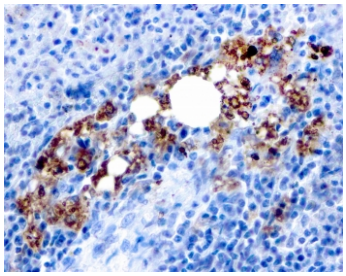
Recombinant MOUSE MONOCLONAL

Bulk quote request

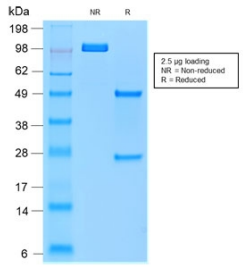
| | |
|---|---|
| **Availability** | 1-3 business days |
| **Species Reactivity** | Human, Mouse, Rat |
| **Format** | Purified |
| **Host** | Mouse |
| **Clonality** | Recombinant Mouse Monoclonal |
| **Isotype** | Mouse IgG1, kappa |
| **Clone Name** | rACP5/1070 |
| **Purity** | Protein G affinity chromatography |
| **UniProt** | P13686 |
| **Localization** | Cytoplasmic (lysosomes) |
| **Applications** | Immunohistochemistry (FFPE): 0.5-1ug/ml for 30 min at RT |
| **Limitations** | This recombinant TRAcP antibody is available for research use only. |




Analysis of HuProt(TM) microarray containing more than 19,000 full-length human proteins using recombinant TRAcP antibody (clone rACP5/1070). These results demonstrate the foremost specificity of the rACP5/1070 mAb.
Z- and S- score: The Z-score represents the strength of a signal that an antibody (in combination with a fluorescently-tagged anti-IgG secondary Ab) produces when binding to a particular protein on the HuProt(TM) array. Z-scores are described in units of standard deviations (SD's) above the mean value of all signals generated on that array. If the targets on the HuProt(TM) are arranged in descending order of the Z-score, the S-score is the difference (also in units of SD's) between the Z-scores. The S-score therefore represents the relative target specificity of an Ab to its intended target.



IHC testing of FFPE human spleen with recombinant TRAcP antibody (clone rACP5/1070). Required HIER: boil tissue sections in 10mM citrate buffer, pH 6.0, for 10-20 min followed by cooling at RT for 20 min.




SDS-PAGE analysis of purified, BSA-free recombinant TRAcP antibody (clone rACP5/1070) as confirmation of integrity and purity.

## Description

Recombinant TRAcP antibody is used to detect tartrate resistant acid phosphatase, also known as ACP5, a lysosomal glycoprotein expressed primarily in osteoclasts and certain macrophages. TRAcP is an iron containing metalloenzyme that hydrolyzes phosphate esters in acidic environments. Because of its selective expression, TRAcP is an established marker of osteoclast activity and bone resorption. It also contributes to immune cell function, making it significant in both skeletal biology and immunology.

Two major isoforms of TRAcP, 5a and 5b, differ in glycosylation patterns and tissue distribution. Isoform 5b is particularly enriched in osteoclasts and is commonly used as a biomarker for bone turnover. By degrading organic phosphate esters, TRAcP contributes to mineral metabolism and bone remodeling. Mutations in ACP5 are associated with spondyloenchondrodysplasia, a rare disorder characterized by skeletal abnormalities and immune dysregulation.

The Recombinant TRAcP antibody clone rACP5/1070 provides specific detection of this enzyme with consistent performance. Recombinant production ensures batch uniformity and reliable results across experiments. Clone rACP5/1070 has been applied in studies of bone metabolism, osteoclast differentiation, and inflammatory processes where TRAcP activity plays a regulatory role. Its reproducibility makes it a trusted reagent in both basic research and translational studies.

Research into TRAcP has clarified its function in bone physiology and pathology. Elevated TRAcP activity is observed in conditions with increased bone turnover, such as osteoporosis, Paget disease, and bone metastases. In immunology, TRAcP influences macrophage function and contributes to regulation of reactive oxygen species. Studies using clone rACP5/1070 continue to provide insights into the dual roles of TRAcP in skeletal and immune systems.

NSJ Bioreagents offers this Recombinant TRAcP antibody to support research into bone resorption, osteoclast biology,

and immune regulation. The protein is also described as ACP5 antibody, tartrate resistant acid phosphatase 5b antibody, osteoclast acid phosphatase antibody, and lysosomal metalloenzyme antibody, reflecting the diverse ways researchers reference this target.

## Application Notes

Optimal dilution of the recombinant TRAcP antibody should be determined by the researcher.

1. The prediluted format is supplied in a dropper bottle and is optimized for use in IHC. After epitope retrieval step (if required), drip mAb solution onto the tissue section and incubate at RT for 30 min.

## Immunogen

Recombinant full-length human protein was used as the immunogen for the recombinant TRAcP antibody.

## Storage

Store the recombinant TRAcP antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).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