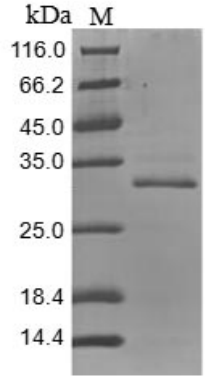
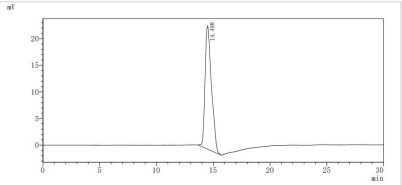
Recombinant Mouse Tenascin (Tnc), partial

Product Code	CSB-MP768917MO
Relevance	Extracellular matrix protein implicated in guidance of migrating neurons as well as axons during development, synaptic plasticity as well as neuronal regeneration. Promotes neurite outgrowth when provided to neurons in culture. May play a role in supporting the growth of epithelial tumors. Ligand for integrins ITGA8:ITGB1, ITGA9:ITGB1, ITGAV:ITGB3 and ITGAV:ITGB6. In tumors, stimulates angiogenesis by elongation, migration and sprouting of endothelial cells
Abbreviation	Recombinant Mouse Tnc protein, partial
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	Q80YX1
Storage Buffer	Tris-based buffer,50% glycerol
Product Type	Recombinant Proteins
Immunogen Species	Mus musculus (Mouse)
Purity	Greater than 90% as determined by SDS-PAGE. Greater than 95% as determined by SEC-HPLC.
Sequence	GLLYPFPRDCSQAMLNGDTTSGLYTIYINGDKTQALEVYCDMTSDGGGWIVFL RRKNGREDFYRNWKAYAAGFGDRREEFWLGLDNLSKITAQGQYELRVDLQD HGESAYAVYDRFSVGDAKSRYKLKVEGYSGTAGDSMNYHNGRSFSTYDKDT DSAITNCALSYKGAFWYKNCHRVNLMGRYGDNNHSQGVNWFHWKGHEYSIQ FAEMKLRPSN
Research Area	Signal Transduction
Source	Mammalian cell
Target Names	Tnc
Protein Names	HexabrachionTenascin-CShort name:TN-C Hxb
Expression Region	1884-2099aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 10xHis-tagged and C-terminal Myc-tagged
Mol. Weight	28.8 kDa
Protein Length	Partial
Image	



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.



The purity of Tnc was greater than 95% as determined by SEC-HPLC

Description

This recombinant Mouse Tenascin (Tnc) comes from a mammalian cell expression system and represents a partial protein spanning amino acids 1884-2099. The protein carries both an N-terminal 10xHis-tag and a C-terminal Myc-tag, which should make purification and detection more straightforward. SDS-PAGE analysis indicates the purity exceeds 85%, suggesting it's well-suited for laboratory work. This product is for research use only.

Tenascin appears to be a key extracellular matrix protein with important roles in how tissues develop and repair themselves. The protein seems to influence cell signaling pathways that control how cells stick together, move around, and differentiate into specialized types. Developmental biologists and cancer researchers pay particular attention to tenascin since its expression patterns often change dramatically in these contexts. Studying how this protein works and what it interacts with might reveal important details about these biological processes.

Potential Applications

Note: The applications listed below are based on what we know about this protein's biological functions, published research, and experience from experts in the field. However, we haven't fully tested all of these applications ourselves yet. We'd recommend running some preliminary tests first to make sure they work for your specific research goals.

1. Antibody Development and Validation Studies

This mouse Tenascin fragment (amino acids 1884-2099) could work well as an immunogen or coating antigen when developing antibodies that target this specific C-terminal region of Tnc. The His and Myc tags should make purification easier and help with detection during antibody screening. Researchers might find this protein useful in ELISA-based screens to test

antibody specificity and check for unwanted cross-reactions. Since it's made in mammalian cells, the protein folding and post-translational modifications are likely to be correct—something that may be important for proper antibody recognition.

2. Protein-Protein Interaction Studies

The C-terminal region of Tenascin contains functional domains that might interact with other extracellular matrix proteins, cell surface receptors, or various signaling molecules. This fragment could prove valuable in pull-down experiments, where the His tag allows for immobilization on nickel resins to fish out potential binding partners from cell lysates or tissue samples. The Myc tag makes it simple to detect and confirm the bait protein during Western blot analysis. These kinds of studies may help researchers figure out exactly how Tenascin organizes the extracellular matrix at the molecular level.

3. Biochemical Characterization and Structural Studies

Having this purified Tenascin fragment opens up possibilities for detailed biochemical analysis of the C-terminal region's characteristics—things like how stable it is at different temperatures, how it responds to pH changes, and whether it forms oligomers. The high purity (>85%) suggests it should work well with biophysical methods like dynamic light scattering, circular dichroism spectroscopy, or analytical ultracentrifugation. Both tags give researchers multiple ways to detect and measure the protein during these experiments. Such work might reveal important structural features and stability patterns for this particular Tenascin domain.

4. Cell Adhesion and Migration Assays

Researchers could coat culture plates with this Tenascin fragment to create controlled extracellular matrix environments and watch how different mouse cell lines respond. This approach allows scientists to investigate whether the protein affects how cells attach, spread out, or migrate across surfaces. This specific amino acid region might contain cell-binding domains or sequences that actually discourage cell adhesion—both scenarios could influence how cells behave. In vitro experiments like these may help determine what role this particular piece of Tenascin plays in cell-matrix interactions.

5. Competitive Binding and Inhibition Studies

This fragment might serve as a competitor or inhibitor in experiments designed to study how full-length Tenascin interacts with cellular receptors or other matrix components. Running competition experiments with this recombinant piece could help researchers determine whether the C-terminal region (amino acids 1884-2099) is actually necessary for specific biological interactions. The tagged protein is easy to measure and track during these assays, which should allow for careful dose-response studies. Experiments like these may help map out which parts of the full-length Tenascin protein are functionally important and identify where critical binding sites are located.

Shelf Life	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.