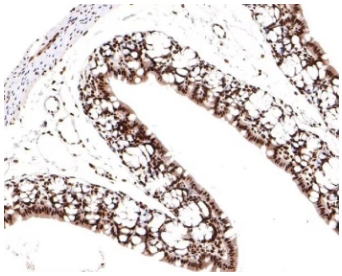
TCEA1 Antibody / Transcription elongation factor A protein 1 [clone 29T88] (FY13340)

Catalog No.	Formulation	Size
FY13340	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA	100 ul

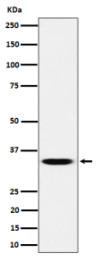
Recombinant RABBIT MONOCLONAL

Bulk quote request

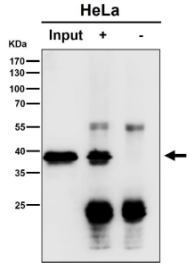
Availability	2-3 weeks
Species Reactivity	Human, Mouse, Rat
Format	Liquid
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	29T88
Purity	Affinity chromatography
Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
UniProt	P23193
Localization	Nuclear, cytoplasmic
Applications	Western blot: 1:500-1:2000 Immunohistochemistry: 1:50-1:200 Immunocytochemistry/Immunofluorescence: 1:50-1:200 Immunoprecipitation: 1:50
Limitations	This TCEA1 antibody is available for research use only.



Immunohistochemical staining of paraffin-embedded mouse large intestine tissue with TCEA1 antibody.



Western blot analysis of TCEA1 expression in human HeLa cell lysate. Predicted molecular weight ~34 kDa.



Immunoprecipitation analysis using the antibody at 1:50 dilution. Western blot at 1:1000 dilution. Predicted molecular weight ~34 kDa. A band is detected at approximately 38-39 kDa in the IP lane, slightly above the predicted ~34 kDa size. This upward shift is consistent with altered migration of immunoprecipitated material, which often reflects partial complex retention or antibody related artifacts rather than a distinct isoform. The control IgG lane shows no corresponding band, confirming specificity of the immunoprecipitation.

Description

TCEA1 antibody detects Transcription elongation factor A protein 1, encoded by the TCEA1 gene. Transcription elongation factor A protein 1 is a key regulator of RNA polymerase II transcriptional elongation and RNA processing. TCEA1 antibody provides researchers with a specific reagent to study transcriptional control, gene expression regulation, and cellular responses to DNA damage.

Transcription elongation factor A protein 1 enhances the activity of RNA polymerase II by stimulating transcript elongation and resolving transcriptional arrest. Research using TCEA1 antibody has shown that it acts as a transcriptional cofactor by interacting with paused polymerase complexes and promoting the resumption of RNA synthesis. This activity ensures efficient transcription of protein coding genes, supporting diverse cellular processes including growth, proliferation, and differentiation.

Studies with TCEA1 antibody have revealed that this factor also contributes to transcription coupled DNA repair. When RNA polymerase II encounters DNA damage, TCEA1 facilitates backtracking of the polymerase, enabling access for repair enzymes. This role links transcriptional regulation with genome stability and provides a mechanism for protecting cells from genotoxic stress. Dysregulation of this pathway may impair DNA repair capacity and promote disease development.

Beyond transcriptional elongation, Transcription elongation factor A protein 1 influences chromatin remodeling. Research using TCEA1 antibody has demonstrated that it cooperates with other transcriptional cofactors to modify chromatin architecture, enhancing promoter clearance and elongation efficiency. This highlights its integration into a broader regulatory network that coordinates transcription with chromatin state.

Dysregulation of TCEA1 expression has been implicated in cancer and neurological disease. Studies with TCEA1 antibody have shown that altered levels can disrupt transcription fidelity, impair DNA repair, and promote genomic instability. Overexpression in some cancers may provide tumor cells with enhanced transcriptional capacity, while deficiencies have been linked to neurodegeneration. These findings underscore its importance in both health and pathology.

TCEA1 antibody is commonly applied in western blotting, immunohistochemistry, and chromatin immunoprecipitation. Western blotting detects protein expression levels, immunohistochemistry reveals nuclear localization in tissue, and chromatin immunoprecipitation maps binding to actively transcribed genes. These applications make TCEA1 antibody indispensable for transcription biology research.

By supplying validated TCEA1 antibody reagents, NSJ Bioreagents supports studies into transcription elongation, DNA repair, and disease mechanisms. Detection of Transcription elongation factor A protein 1 provides insight into how cells maintain transcriptional integrity and genome stability.

Application Notes

Optimal dilution of the TCEA1 antibody should be determined by the researcher.

Immunogen

A synthesized peptide derived from human TCEA1 was used as the immunogen for the TCEA1 antibody.

Storage

Store the TCEA1 antibody at -20oC.

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