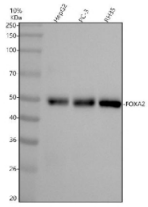
FOXA2 Antibody / Forkhead box protein A2 [clone AAAH-6] (FY13409)

Catalog No.	Formulation	Size
FY13409	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	1-2 days
Species Reactivity	Human, Rat
Format	Liquid
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	AAAH-6
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	Q9Y261
Localization	Cytoplasmic, nuclear
Applications	Western Blot : 1:500-1:2000
Limitations	This FOXA2 antibody is available for research use only.



Western blot testing of human HepG2, PC-3 and rat RH35 cell lysate with FOXA2 antibody. Predicted molecular weight ~50 kDa.

Description

FOXA2 antibody targets Forkhead box protein A2 (FOXA2), a pioneer transcription factor that plays a central role in

chromatin accessibility and lineage-specific gene regulation. FOXA2 localizes predominantly to the nucleus, where it binds compacted chromatin and facilitates recruitment of additional transcriptional regulators. As a member of the forkhead box family, FOXA2 contains a conserved winged-helix DNA-binding domain that enables sequence-specific interaction with regulatory regions controlling developmental and metabolic gene programs. Its ability to engage closed chromatin positions FOXA2 as an early regulator of cell fate decisions.

Functionally, FOXA2 is essential for endoderm formation and the development of organs derived from this lineage, including liver, pancreas, lung, and gastrointestinal tract. During development, FOXA2 establishes transcriptional competence at enhancers and promoters that later become activated by tissue-specific factors. In differentiated tissues, FOXA2 continues to regulate genes involved in metabolic homeostasis, epithelial identity, and secretory function. A FOXA2 antibody supports studies examining transcriptional priming, chromatin dynamics, and lineage specification.

FOXA2 expression is tightly regulated in a spatial and temporal manner. It is highly expressed during early developmental stages and remains active in select adult cell populations, particularly in endoderm-derived epithelia. Through cooperative interactions with other transcription factors, FOXA2 integrates signaling inputs to fine-tune gene expression patterns. Analysis of FOXA2 localization and abundance provides insight into regulatory states associated with differentiation, maturation, and tissue maintenance.

From a biological and disease-relevance perspective, FOXA2 has been studied in metabolic regulation, developmental disorders, and cancer biology. Altered FOXA2 expression or activity can disrupt transcriptional networks that govern epithelial organization and metabolic balance. In cancer research, FOXA2 is frequently evaluated as a marker of lineage identity and transcriptional state, reflecting its role in maintaining differentiated gene expression programs. Understanding FOXA2 regulation helps clarify how chromatin accessibility and transcription factor hierarchies influence cell behavior in normal and disease contexts.

At the molecular level, FOXA2 is encoded by the FOXA2 gene and produces a nuclear protein of approximately 48-50 kDa. The protein's forkhead DNA-binding domain enables stable interaction with nucleosomal DNA, while additional regions mediate interactions with co-regulators and transcriptional machinery. Regulation of FOXA2 activity depends on developmental cues, signaling pathways, and chromatin context. A FOXA2 antibody supports research applications focused on transcriptional regulation, chromatin biology, and developmental gene control, with NSJ Bioreagents providing reagents intended for research use.

Application Notes

Optimal dilution of the FOXA2 antibody should be determined by the researcher.

Immunogen

A synthesized peptide derived from human Forkhead box protein A2 protein was used as the immunogen for the FOXA2 antibody.

Storage

Store the FOXA2 antibody at -20oC.