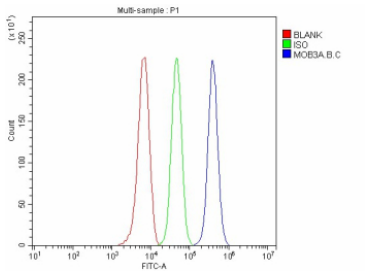
MOB3A/B/C Antibody / MOB kinase activator 3 (FY12857)

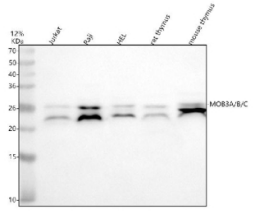
Catalog No.	Formulation	Size
FY12857	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q96BX8
Applications	Western Blot : 0.25-0.5ug/ml Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5ug/ml
Limitations	This MOB3A/B/C antibody is available for research use only.



Flow Cytometry analysis of Raji cells using anti-MOB3A/B/C antibody. Overlay histogram showing Raji cells stained with (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-MOB3A/B/C antibody (1 ug/million cells) for 30 min at 20oC. DyLight 488 conjugated goat anti-rabbit IgG (5-10 ug/million cells) was used as secondary antibody for 30 minutes at 20oC. Isotype control antibody (Green line) was rabbit IgG (1 ug/million cells) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.



Western blot analysis of MOB3A/B/C using anti-MOB3A/B/C antibody. Lane 1: human Jurkat whole cell lysates, Lane 2: human Raji whole cell lysates, Lane 3: human HEL whole cell lysates, Lane 4: rat thymus tissue lysates, Lane 5: mouse thymus tissue lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-MOB3A/B/C antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using enhanced chemiluminescent. MOB3A/B/C western blot shows a characteristic doublet at ~23 and ~26 kDa across human and rodent samples. The paired bands are consistent with closely migrating MOB3 isoforms and phosphorylation-dependent mobility shifts commonly observed for MOB-family adaptors.

Description

MOB3A/B/C antibody detects MOB kinase activator 3A, 3B, and 3C, a conserved family of adaptor proteins that function as key regulators of Hippo signaling, cell polarity, and apoptotic control. Encoded by three closely related genes-MOB3A, MOB3B, and MOB3C-these proteins belong to the MOB (Mps one binder) family, which serve as phosphorylation-dependent scaffolds that link upstream kinases to their downstream effectors in multiple signaling pathways. MOB3 family members share strong sequence conservation and overlapping functions in maintaining tissue architecture, controlling cell proliferation, and coordinating responses to cellular stress.

MOB3A/B/C proteins are small, approximately 25 kilodaltons each, and are characterized by a conserved MOB domain that mediates interactions with serine/threonine kinases of the NDR and LATS families. Through these interactions, MOB3 proteins modulate kinase activation, subcellular localization, and substrate specificity, ensuring tight regulation of the Hippo pathway that governs cell growth and apoptosis. By binding to MST1 (STK4), MOB3A/B/C proteins also influence apoptosis by promoting caspase activation and stress-induced cell death.

The MOB3A/B/C antibody is widely used in cell signaling, cancer biology, and developmental research to investigate adaptor-mediated kinase regulation and signal transduction dynamics. Western blot analysis detects multiple closely migrating bands around 25 kilodaltons corresponding to MOB3A, MOB3B, and MOB3C, while immunofluorescence reveals predominantly cytoplasmic localization with enrichment at the plasma membrane and perinuclear regions. This antibody is a valuable reagent for characterizing how MOB3 family proteins integrate kinase signaling with cell polarity and cytoskeletal control.

Functionally, MOB3 proteins act as regulatory scaffolds that promote or inhibit kinase cascades depending on cellular context. In the Hippo pathway, they interact with core kinases such as LATS1/2 and MST1/2, affecting downstream transcriptional regulators YAP and TAZ. Beyond Hippo signaling, MOB3 family members influence other cellular networks, including MAPK and apoptotic pathways, linking extracellular cues to transcriptional and structural outcomes. Dysregulation of MOB3 expression has been associated with oncogenesis, particularly in liver, colorectal, and pancreatic cancers, where altered MOB3 levels disturb growth control and apoptosis balance.

At the molecular level, MOB3A/B/C proteins undergo post-translational modifications, including phosphorylation and ubiquitination, that fine-tune their adaptor functions. MOB3A has been shown to bind MST1 and inhibit its pro-apoptotic signaling, while MOB3B and MOB3C may modulate this interaction to preserve mitochondrial integrity. These opposing roles underscore the complex regulatory balance maintained by the MOB3 family in coordinating survival and cell death pathways. The MOB3A/B/C antibody provides a robust approach for monitoring these interactions and assessing the contribution of each isoform to kinase network regulation.

In developmental systems, MOB3 proteins participate in epithelial tissue patterning and organ growth through modulation of cell junction integrity and polarity establishment. Their expression is tightly controlled during embryogenesis and tissue

regeneration. Deficiency or imbalance in MOB3 activity leads to deregulated proliferation and impaired tissue architecture, highlighting their importance in maintaining cellular organization. The MOB3A/B/C antibody allows precise detection of these proteins in both developmental and disease contexts, supporting mechanistic studies of Hippo pathway control and kinase cross-talk.

In disease models, overexpression of MOB3A or MOB3B correlates with tumor progression and reduced apoptosis, while loss of MOB3C expression may enhance susceptibility to cellular stress. Their dual nature-as tumor suppressors or promoters depending on signaling balance-makes them central nodes in cancer signaling networks. Using the MOB3A/B/C antibody, researchers can track changes in expression, post-translational modification, and subcellular distribution that define these divergent outcomes.

NSJ Bioreagents provides a rigorously validated MOB3A/B/C antibody optimized for its applications. Its sensitivity and specificity make it ideal for studying Hippo pathway dynamics, kinase regulation, and cell polarity mechanisms across diverse cell types and conditions. This antibody supports high-confidence analysis of MOB3 family function in normal physiology, developmental signaling, and oncogenic transformation.

Application Notes

Optimal dilution of the MOB3A/B/C antibody should be determined by the researcher.

Immunogen

E.coli-derived human MOB3A/B/C recombinant protein (Position: E30-H217) was used as the immunogen for the MOB3A/B/C antibody.

Storage

After reconstitution, the MOB3A/B/C antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.