10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

FOXO3 / FOXO3A Antibody (C-Terminus)

Goat Polyclonal Antibody
Catalog # ALS13076

Specification

FOXO3 / FOXO3A Antibody (C-Terminus) - Product Information

Application	**IHC**
Primary Accession	O43524
Reactivity	**Human, Mouse, Rat, Rabbit, Hamster, Monkey, Pig, Chicken, Sheep, Horse, Bovine, Dog**
Host	**Goat**
Clonality	**Polyclonal**
Calculated MW	**71kDa KDa**

FOXO3 / FOXO3A Antibody (C-Terminus) - Additional Information

Gene ID 2309

Other Names
Forkhead box protein O3, AF6q21 protein, Forkhead in rhabdomyosarcoma-like 1, FOXO3, FKHRL1, FOXO3A

Target/Specificity
Human FOXO3 / FOXO3A. Both variants represent identical protein (NP_001446.1and NP_963853.1).

Reconstitution & Storage
Store at -20°C. Minimize freezing and thawing.

Precautions
FOXO3 / FOXO3A Antibody (C-Terminus) is for research use only and not for use in diagnostic or therapeutic procedures.

FOXO3 / FOXO3A Antibody (C-Terminus) - Protein Information

Name FOXO3 (HGNC:3821)

Function
Transcriptional activator that recognizes and binds to the DNA sequence 5'-[AG]TAAA[TC]A-3' and regulates different processes, such as apoptosis and autophagy (PubMed:10102273, PubMed:16751106, PubMed:21329882, PubMed:30513302). Acts as a positive regulator of autophagy in skeletal muscle: in starved cells, enters the nucleus following dephosphorylation and binds the promoters of autophagy genes, such as GABARAP1L, MAP1LC3B and ATG12, thereby activating their expression, resulting in proteolysis of skeletal muscle proteins

(By similarity). Triggers apoptosis in the absence of survival factors, including neuronal cell death upon oxidative stress (PubMed:10102273, PubMed:16751106). Participates in post-transcriptional regulation of MYC: following phosphorylation by MAPKAPK5, promotes induction of miR- 34b and miR-34c expression, 2 post-transcriptional regulators of MYC that bind to the 3'UTR of MYC transcript and prevent its translation (PubMed:21329882). In response to metabolic stress, translocates into the mitochondria where it promotes mtDNA transcription (PubMed:23283301). In response to metabolic stress, translocates into the mitochondria where it promotes mtDNA transcription. Also acts as a key regulator of chondrogenic commitment of skeletal progenitor cells in response to lipid availability: when lipids levels are low, translocates to the nucleus and promotes expression of SOX9, which induces chondrogenic commitment and suppresses fatty acid oxidation (By similarity). Also acts as a key regulator of regulatory T-cells (Treg) differentiation by activating expression of FOXP3 (PubMed:30513302).

Cellular Location
Cytoplasm, cytosol. Nucleus Mitochondrion matrix. Mitochondrion outer membrane; Peripheral membrane protein; Cytoplasmic side. Note=Retention in the cytoplasm contributes to its inactivation (PubMed:10102273, PubMed:15084260, PubMed:16751106). Translocates to the nucleus upon oxidative stress and in the absence of survival factors (PubMed:10102273, PubMed:16751106) Translocates from the cytosol to the nucleus following dephosphorylation in response to autophagy-inducing stimuli (By similarity). Translocates in a AMPK-dependent manner into the mitochondrion in response to metabolic stress (PubMed:23283301, PubMed:29445193). Serum deprivation increases localization to the nucleus, leading to activate expression of SOX9 and subsequent chondrogenesis (By similarity). {ECO:0000250|UniProtKB:Q9WVH4, ECO:0000269|PubMed:10102273, ECO:0000269|PubMed:15084260, ECO:0000269|PubMed:16751106, ECO:0000269|PubMed:23283301, ECO:0000269|PubMed:29445193}

Tissue Location
Ubiquitous..

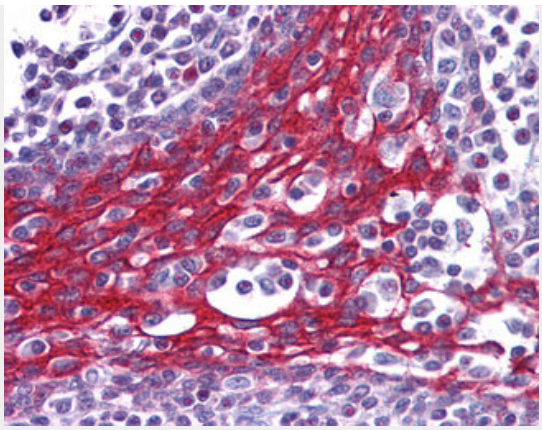
FOXO3 / FOXO3A Antibody (C-Terminus) - Protocols

Provided below are standard protocols that you may find useful for product applications.

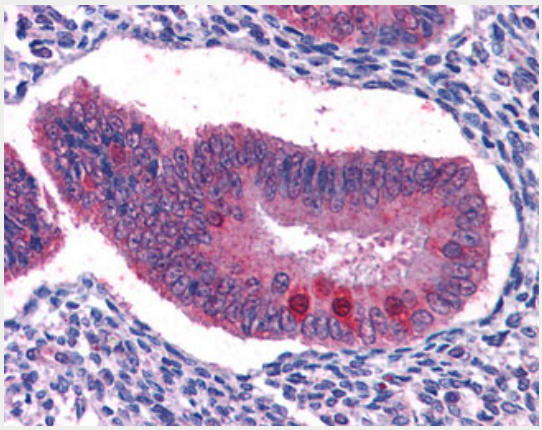
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

FOXO3 / FOXO3A Antibody (C-Terminus) - Images

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Anti-FOXO3A antibody IHC of human tonsil.



Anti-FOXO3A antibody IHC of human uterus.

FOXO3 / FOXO3A Antibody (C-Terminus) - Background

Transcriptional activator which triggers apoptosis in the absence of survival factors, including neuronal cell death upon oxidative stress. Recognizes and binds to the DNA sequence 5'-[AG]TAAA[TC]A-3'. Participates in post-transcriptional regulation of MYC: following phosphorylation by MAPKAPK5, promotes induction of miR-34b and miR-34c expression, 2 post-transcriptional regulators of MYC that bind to the 3'UTR of MYC transcript and prevent its translation.

FOXO3 / FOXO3A Antibody (C-Terminus) - References

Anderson M.J.,et al.Genomics 47:187-199(1998).
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Mungall A.J.,et al.Nature 425:805-811(2003).
Mural R.J.,et al.Submitted (SEP-2005) to the EMBL/GenBank/DDBJ databases.
Hillion J.,et al.Blood 90:3714-3719(1997).