

BHLHA15 Antibody

Catalog # ASC11717

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	Q7RTS1
Other Accession	NP_803238 , 29126247
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	20818
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	BHLHA15 antibody can be used for detection of BHLHA15 by Western blot at 1 - 2 μ g/ml. Antibody can also be used for Immunohistochemistry starting at 5 μ g/mL. For immunofluorescence start at 20 μ g/mL.

Additional Information

Gene ID	168620
Other Names	Class A basic helix-loop-helix protein 15, bHLHa15, Class B basic helix-loop-helix protein 8, bHLHb8, Muscle, intestine and stomach expression 1, MIST-1, BHLHA15, BHLHB8, MIST1
Target/Specificity	BHLHA15; BHLHA15 antibody is human, mouse and rat reactive.
Reconstitution & Storage	BHLHA15 antibody can be stored at 4°C for three months and -20°C, stable for up to one year.
Precautions	BHLHA15 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	BHLHA15
Synonyms	BHLHB8, MIST1
Function	Plays a role in controlling the transcriptional activity of MYOD1, ensuring that expanding myoblast populations remain undifferentiated. Repression may occur through muscle-specific E-box occupancy by homodimers. May also negatively regulate bHLH-mediated transcription through an N-terminal repressor domain. Serves as a key regulator of acinar cell function, stability, and identity. Also required for normal organelle localization in exocrine cells and for mitochondrial calcium ion transport. May function as a unique regulator of gene expression in several different embryonic and postnatal cell

lineages. Binds to the E-box consensus sequence 5'-CANNTG-3' (By similarity).

Cellular Location

Nucleus.

Tissue Location

Expressed in brain, liver, spleen and skeletal muscle.

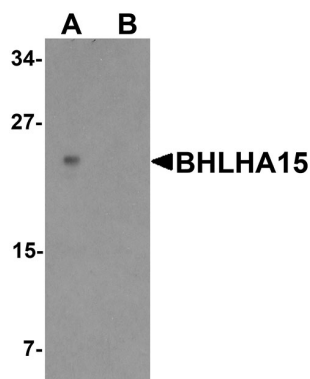
Background

BHLHA15 (basic helix-loop-helix protein 15), also known as MIST1 (muscle intestine and stomach expression 1) belongs to the bHLH family of transcription factors and plays a role in regulating the transcriptional activity of MYOD1 in muscle cell development as well as serving as a key regulator of acinar cell function (1,2). BHLHA15 contains a basic helix-loop-helix (bHLH) domain and is capable of binding to E-box motifs as a homodimer or a heterodimer with E-proteins. It may also negatively regulate bHLH-mediated transcription through a N-terminal repressor domain (3). It is expressed in mammary epithelial cells and is essential for the regulation of mammary gland development (4).

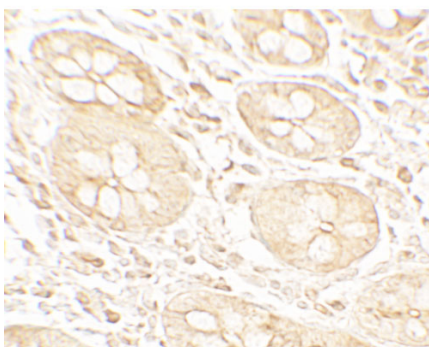
References

Lemerrier C, To RQ, Swanson BJ et al. MIST1: a novel basic helix-loop-helix transcription factor exhibits a developmentally regulated expression pattern. *Dev. Biol.* 1997; 182:101-13.
Pin CL, Rukstalis JM, Johnson C, et al. The bHLH transcription factor MIST1 is required to maintain exocrine pancreas cell organization and acinar cell identity. *J. Cell Biol.* 2001; 155:519-30.
Lemerrier C, To RQ, Carrasco RA et al. The basic helix-loop-helix transcription factor Mist1 functions as a transcriptional repressor of myoD. *EMBO J.* 1998; 17:1412-22.
Zhao Y, Johansson C, Tran T, et al. Identification of a basic helix-loop-helix transcription factor expressed in mammary gland alveolar cells and required for maintenance of the differentiated state. *Mol. Endocrinol.* 2006; 20:2187-98.

Images

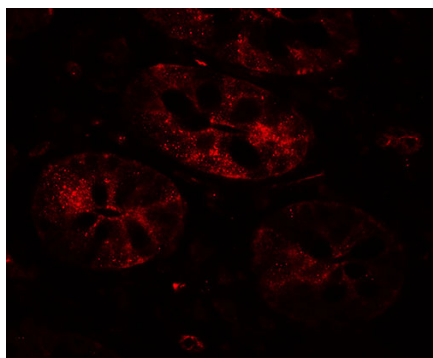


Western blot analysis of BHLHA15 in rat small Intestine tissue lysate with BHLHA15 antibody at 1 µg/ml in (A) the absence and (B) the presence of blocking peptide



Immunohistochemistry of BHLHA15 in human small intestine tissue with BHLHA15 antibody at 5 µg/mL.

Immunofluorescence of BHLHA15 in human small



intestine tissue with BHLHA15 antibody at 20 µg/mL.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.