

**BHLHA15 Antibody**  
**Catalog # ASC11717****Specification**

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**BHLHA15 Antibody - Product Information**

Application	WB, IHC, IF
Primary Accession	<a href="#">Q7RTS1</a>
Other Accession	<a href="#">NP_803238</a> , <a href="#">29126247</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	Predicted: 21 kDa

Application Notes	Observed: 24 kDa KDa BHLHA15 antibody can be used for detection of BHLHA15 by Western blot at 1 - 2 µg/ml. Antibody can also be used for Immunohistochemistry starting at 5 µg/mL. For immunofluorescence start at 20 µg/mL.
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**BHLHA15 Antibody - Additional Information**

Gene ID 168620

**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.

**BHLHA15 Antibody - 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.

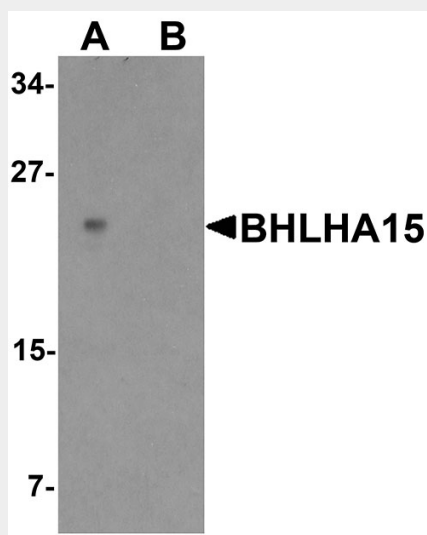
**Tissue Location**

Expressed in brain, liver, spleen and skeletal muscle.

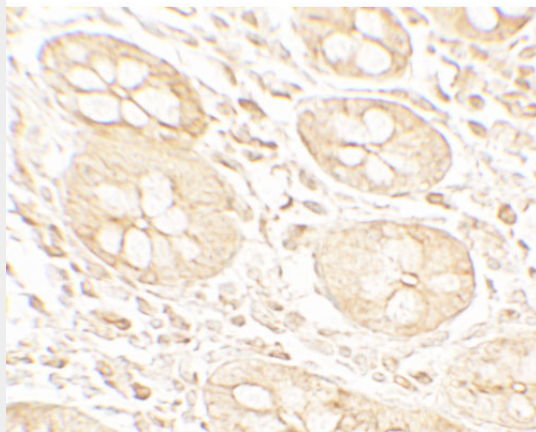
**BHLHA15 Antibody - Protocols**

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

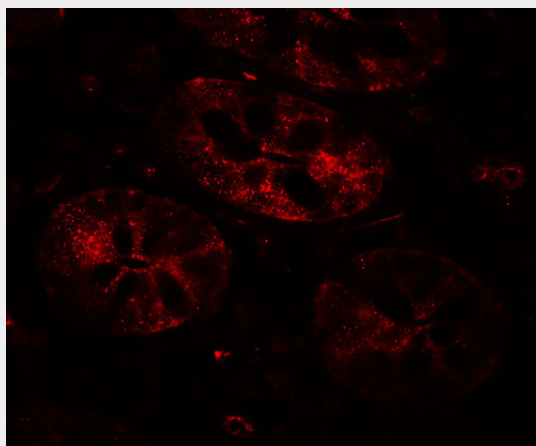
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

**BHLHA15 Antibody - 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  $\mu$ g/mL.



Immunofluorescence of BHLHA15 in human small intestine tissue with BHLHA15 antibody at 20  $\mu$ g/mL.

### **BHLHA15 Antibody - 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).

### **BHLHA15 Antibody - 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.