

**Table 2 – Molecular Beacon BLAST in Xenbase**

Table 2: BLAST of Molecular Beacon sequence against the *Xenopus laevis* genome (version 9.1) using the blastn-DNA query to DNA database tool available at Xenbase (xenbase.org). The absence of RNA expression of matching genome regions was confirmed using RNA-sequencing of axonal transcriptome.

**Column header**

**Comment**

#entry Number of the entry obtained in Xenbase BLAST, tool "blastn-DNA query to DNA database", database "Xenopus Laevis J-strain 9.1 Genome".  
 chr Chromosome  
 hit Sequential number of hits for each chromosome  
 HSP information High-scoring segment pair (BLAST information listed below)  
 chr position Exact chromosome position used as reference for checking match in the axonal seq data  
 Link Direct link with Xenbase genome browser  
 Name Corresponding transcript name of the chromosome location (if reported)  
 Axonal reads in region matching MB Check for absence (no) or presence (yes) of axonal reads in the region matching with MB predicted off-targets

HSP information												
#entry	chr	hit	Score	E-value	Identities	Lenght	Query strand	Hit strand	chr position	Link	Name	Axonal reads in region matching MB
1	chr4S	1	31.9	2	17/17 (100%)	17	+	-	chr4S:84409591-84409607	JBrowse laevis 9.1: chr4S:84409591-84409607	pre-miR-181a-1	Yes
		2	30.1	7	16/16 (100%)	16	+	-	chr4S:79095178-79095163			No
		3	30.1	7	16/16 (100%)	16	+	+	chr4S:86435217-86435232		intron of ivsn1abp.S	No
2	chr3L	1	31.9	2	17/17 (100%)	17	+	+	chr3L:111609451-111609467	JBrowse laevis 9.1: chr3L:111609451-111609467		No
		2	30.1	7	19/21 (90%)	21	+	+	chr3L:89499322-89499342			No
3	chr2S	1	31.9	2	17/17 (100%)	17	+	-	chr2S:95381069-95381085	JBrowse laevis 9.1: chr2S:95381069-95381085		No
		2	30.1	7	16/16 (100%)	16	+	-	chr2S:105454301-105454286			No
4	chr2L	1	31.9	2	17/17 (100%)	17	+	+	chr2L:36241555-36241571	JBrowse laevis 9.1: chr2L:36241555-36241571		No
		2	30.1	7	16/16 (100%)	16	+	-	chr2L:77055047-77055032		intron of cask.L	No
5	chr8L	1	30.1	7	16/16 (100%)	16	+	+	chr8L:83301470-83301485	JBrowse laevis 9.1: chr8L:83301470-83301485	intron of numb.L	No
6	chr7L	1	30.1	7	16/16 (100%)	16	+	+	chr7L:20191991-20192006	JBrowse laevis 9.1: chr7L:20191991-20192006	intron of exoc5.L	No
		2	30.1	7	19/21 (90%)	21	+	+	chr7L:49937355-49937375		5'UTR of slc18a3.L	No
7	chr5S	1	30.1	7	16/16 (100%)	16	+	+	chr5S:81176673-81176688	JBrowse laevis 9.1: chr5S:81176673-81176688	intron of dlgap2.S	No
		2	30.1	7	16/16 (100%)	16	+	-	chr5S:126438407-126438392		intron of ftkbp1b.S	No
8	chr4L	1	30.1	7	16/16 (100%)	16	+	+	chr4L:105418314-105418329	JBrowse laevis 9.1: chr4L:105418314-105418329	intron of ivsn1abp.L	No
9	chr1S	1	30.1	7	16/16 (100%)	16	+	-	chr1S:172192521-172192506	JBrowse laevis 9.1: chr1S:172192506-172192521		No