

Shared targets	Gene name	Expression at E14.5	Function	Reference
miR369-3p	INO80D	not found in database	Chromatin remodeler factor, transcriptional regulation.	1, 2
miR496	MBNL1	not found in database	RNA binding protein, splicing mediator, plays a role in muscle and eye development.	1, 3, 4
miR543	GJC1	no regional signal	Gap junction protein member.	1, 5
	CYP26B1	no regional signal	Enzymes responsible of retinoic acid metabolism.	1, 6
	CXADR	strong signal in brain, ganglia, ear, eye & nose	Cell-to-cell adhesion mediator, component of tight junctions associated to ZO-1.	1, 13
miR369-3p	TRAPPC8	not found in database	Function in secretory and endocytic pathways.	1, 7
miR496	RANBP9	no regional signal	Scaffold protein promotes cofilin activation.	1, 8
	PLXNA2	strong signal in brain and spinal chord	Receptor of semaphorin6A signalling.	1, 9
	ADAM10	strong in peripheral nervous system, ganglia, ear, eye & nose	Involved in N-cadherin cleavage and turnover.	1, 10
	PAX6	strong signal in brain and spinal chord	Transcription factor expressed in RGCs in developing neocortex.	1
	RORA	strong signal in brain and spinal chord & nose	Retinoic acid receptor with neuroprotective function during hypoxia.	1, 11
	KCMF1	no regional signal	Zink finger protein, unknown transcriptional activity, upregulated in epithelial cancers.	1, 12
	PAPPA	moderate signal in brain and peripheral nervous system	Plasma protein involved in IGF-1 bioavailability.	1, 14
	CNOT2	no regional signal	Regulation of mRNA stability. Self-renewal maintenance in embryonic stem cells.	1, 15
	RER1	no regional signal	Putative Golgi-ER retrieval receptor involved in the biogenesis of acetylcholine receptors.	1, 16
	NDST1	no regional signal	Heparan sulfate biosynthesis enzyme.	1, 17

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**Supplementary Table S3.** Predicted mRNA targets to be bound by miR369-3p and miR496, or by miR369-3p, miR496 and miR543.