# Ets1, Elf1, Elf2, GABP $\alpha$ supershifted by wildtype probe but not random probe HEK293



## Ets1, Elf1, Elf2, GABP $\!\alpha$ supershifted by wildtype probe but not random probe

SH-SY5Y

### В

Antibody	-	-	-	ELF2	ETS1	-	-	-	ELF1	GABP	ά
Probe	RND	wт	wт	WТ	WT	mCGA	wт	wт	WT	WT	
Unlabeled WT Probe	-	200x	-	-	-	-	200x	-	-	-	
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Verification that probe does not bind directly to antibodies to create supershifted bands

## С



Ets1, Elf2 supershifted by wildtype probe but not random probe Short run gel to view the free probe

С



SH-SY5Y

Titrating probe to identify minimal probe amount needed to detect the shifted ETS band Short run gel to view the free probe



The WT probe is shifted but not the mutant probe Short run gel to view the free probe



A CONTROL IS MISSING... WE ARE REDOING THIS TO INCLUDE A 'NO LYSATE' CONTROL THAT WILL VERIFY THE INPUT mCGA AND WT PROBE INPUT IS IDENTICAL

#### The WT probe is shifted but not the mutant probe Short run gel to view the free probe



What does the expression of ETS do to ATXN2-luciferase ?

#### Effect of overexpressing Elf2 on ATXN2-luc and mutant ATXN2-luc expression



## WHAT'S THE EVIDENCE





## Model for ETS action on ATXN2 expression



#### Effect of overexpressing ELF2 on ATXN2-luc and mutant ATXN2-luc expression



Raw Data

HEK293



Effect of overexpressing ETS1 on ATXN2-luc and mutant ATXN2-luc expression

ETS sequence on the – strand of the ATXN2 5'-UTR CCGGAAGT ETS sequence on the – strand of the SV40 promoter GCGGAACT





#### Identification of an Enhancer of the Human Activating **Protein-2** $\alpha$ Gene That Contains a Critical Ets1 **Binding Site**

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They are interested in trophoblasts, the cells forming the outer layer of the blastocyst that provide nutrients to the embryo and develop into the majority of the placenta.

#### Identifying putative region containing ETS1 site supporting AP2





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## Placing the frag upstream of SV40 increased luc expression





mETS1 GATGTATC ETS1 GAGGAAGC Changes GAxGxAxC

## Mutation eliminated ETS-mediated increased expression



JEG3 carcinoma cells Relative to pRL-TK-luc