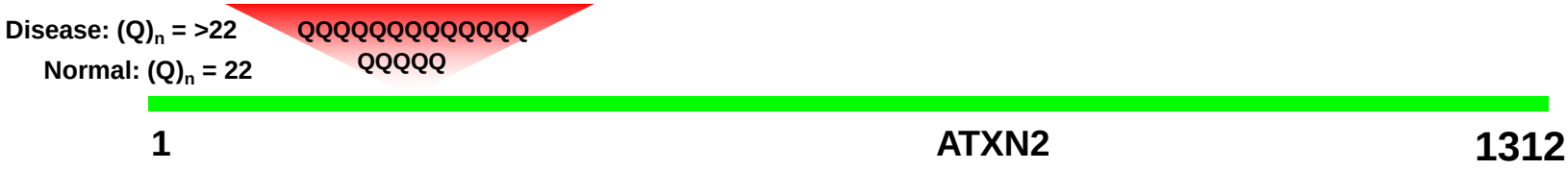
Characterization of SCA2 antibodies

Spinocerebellar Ataxia Type 2 (SCA2)

autosomal dominant neurodegenerative disease



The more repeats mean the earlier the onset of the disease.

A2BP1/Fox1 interact with ATX2 (Shibata et al Hum Mol Genet, 2000)

Mice expressing mutant ATXN2 [ataxin 2 (Q58)] results in the loss of Purkinje cells (Huynh et al Nat Genet, 2000)

Ataxin-2 interacts with the DEAD/H-box RNA helicase DDX6, a component of P-bodies and stress granules. Ataxin-2 regulates the intracellular concentration of the poly(A)-binding protein (stress granule component and a key factor for translational control) [Nonhoff et al Mol Biol Cell, 2007]

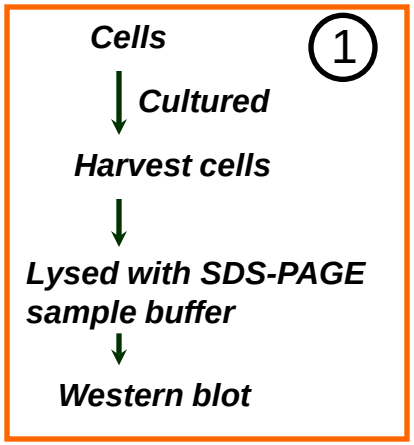
SCA2 antibodies

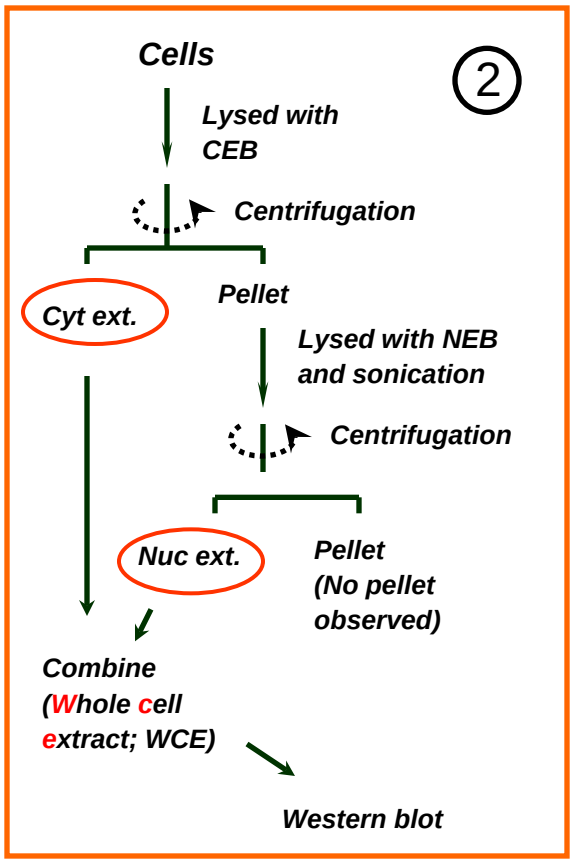
SCA2 (280-293) 0.552 ug/ul

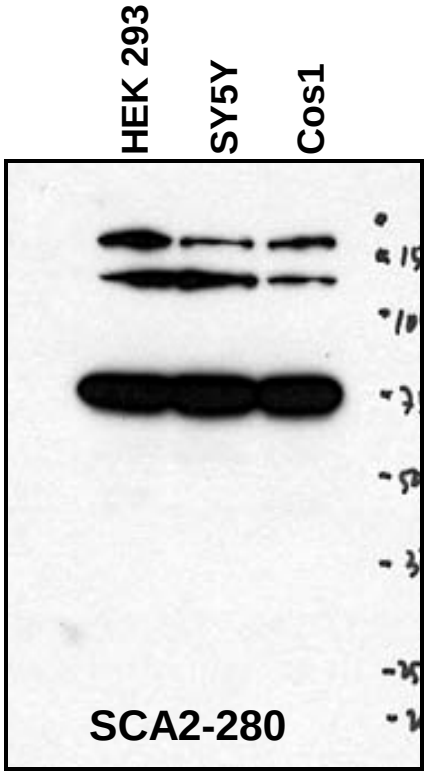
SCA2 (714-730) [714-2] 0.75 ug/ul

SCA2 (790-804) 0.6 ug/ul

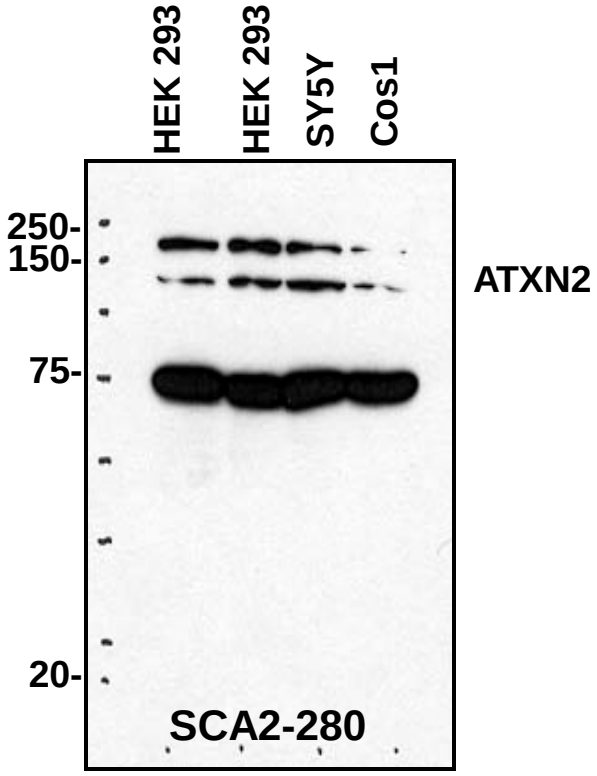
Characterization of SCA2 Antibodies





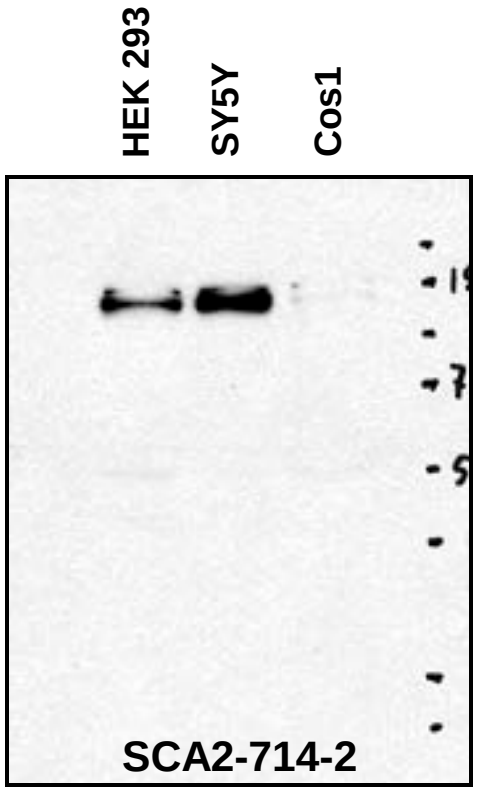


1



2

Characterization of SCA2 Antibodies



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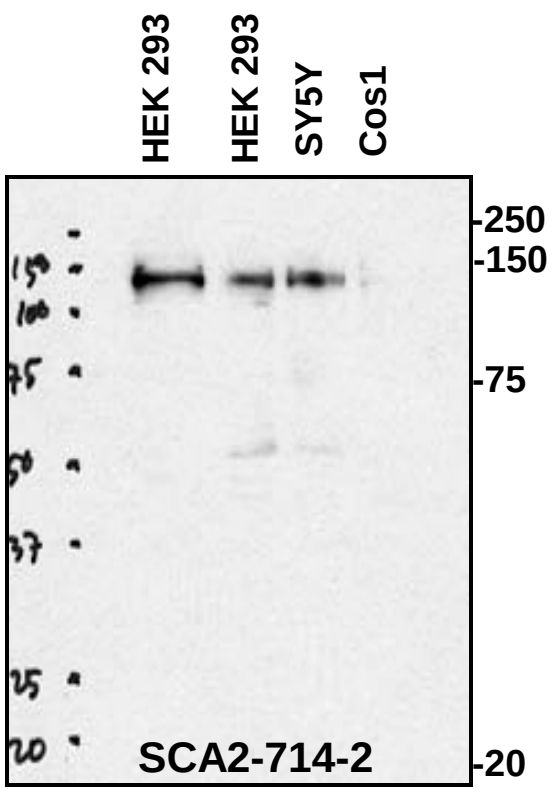

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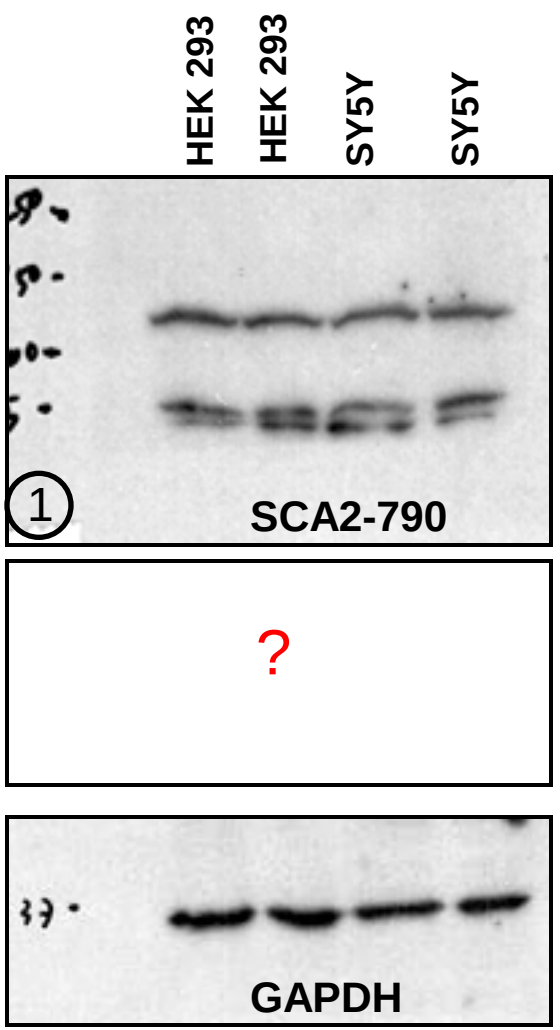
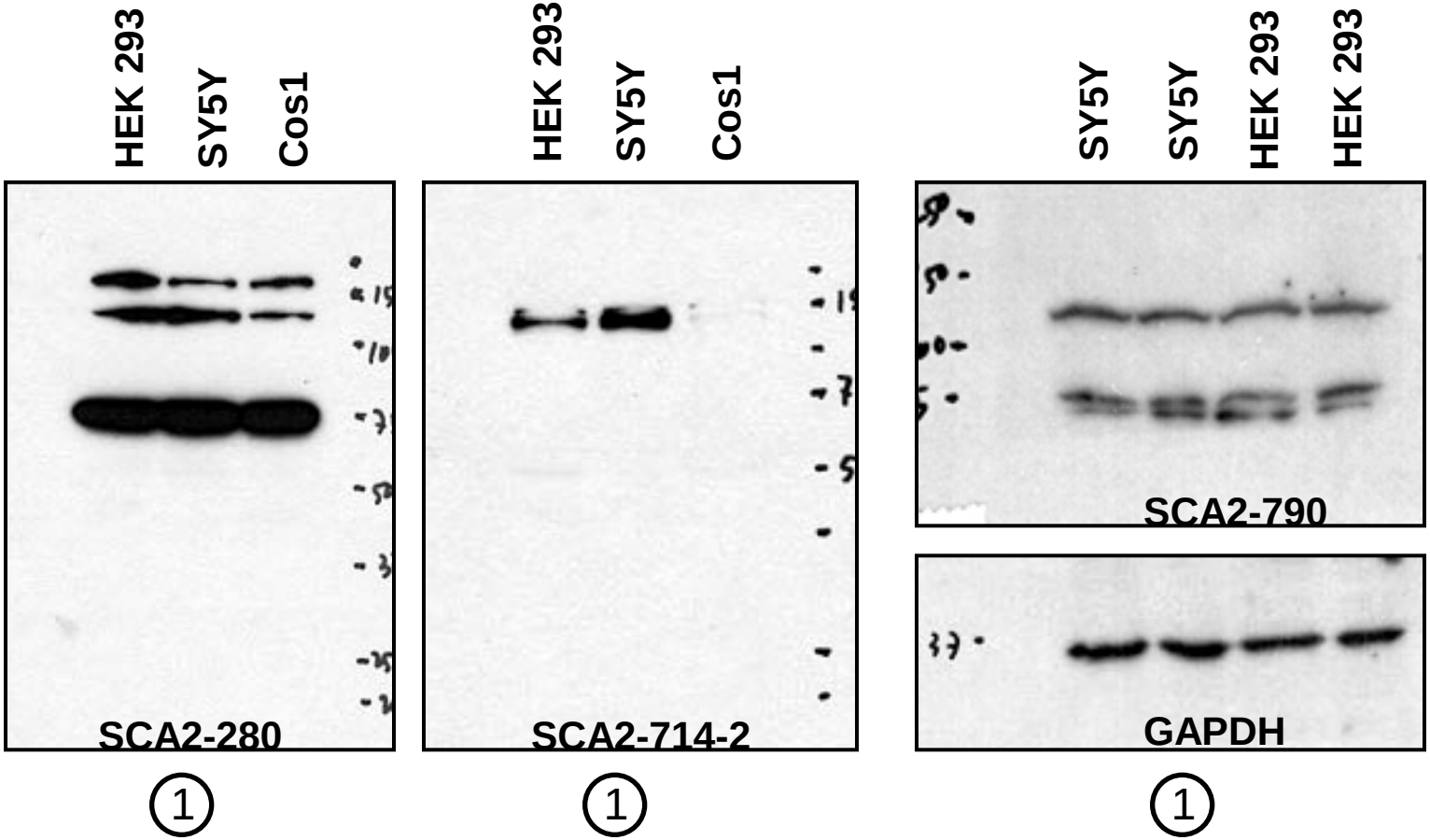
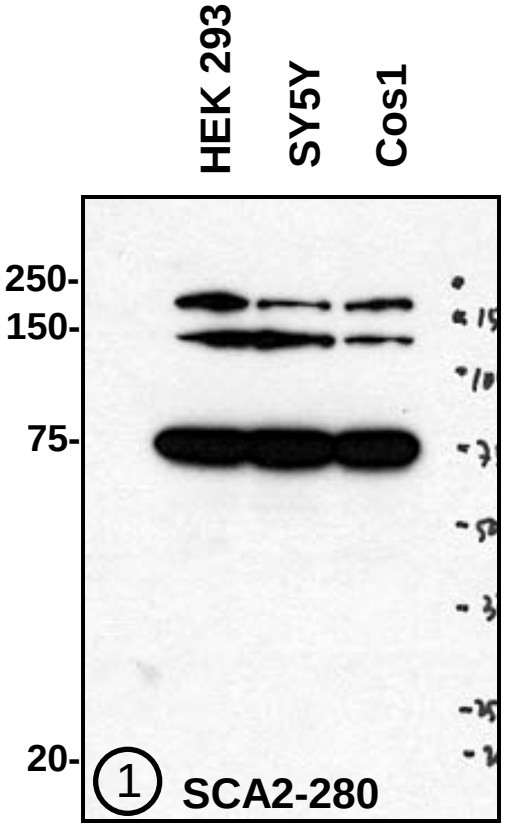


Summary of SCA2 Antibodies in Western blot

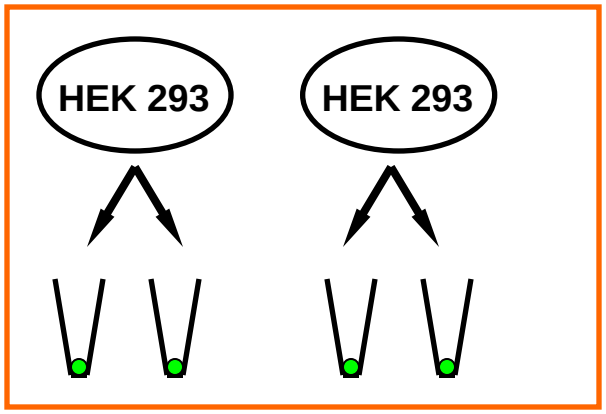


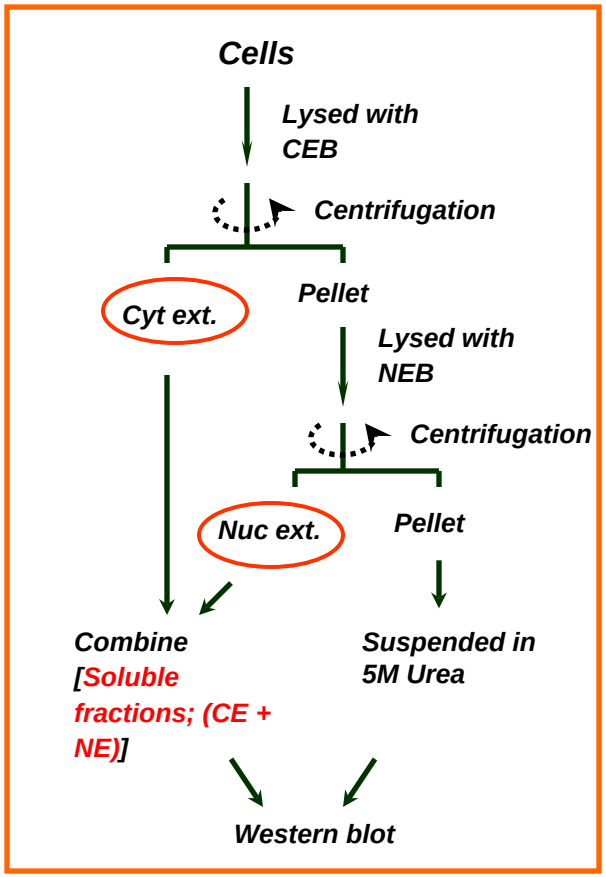
Proteins distribution in sub-cellular fractions



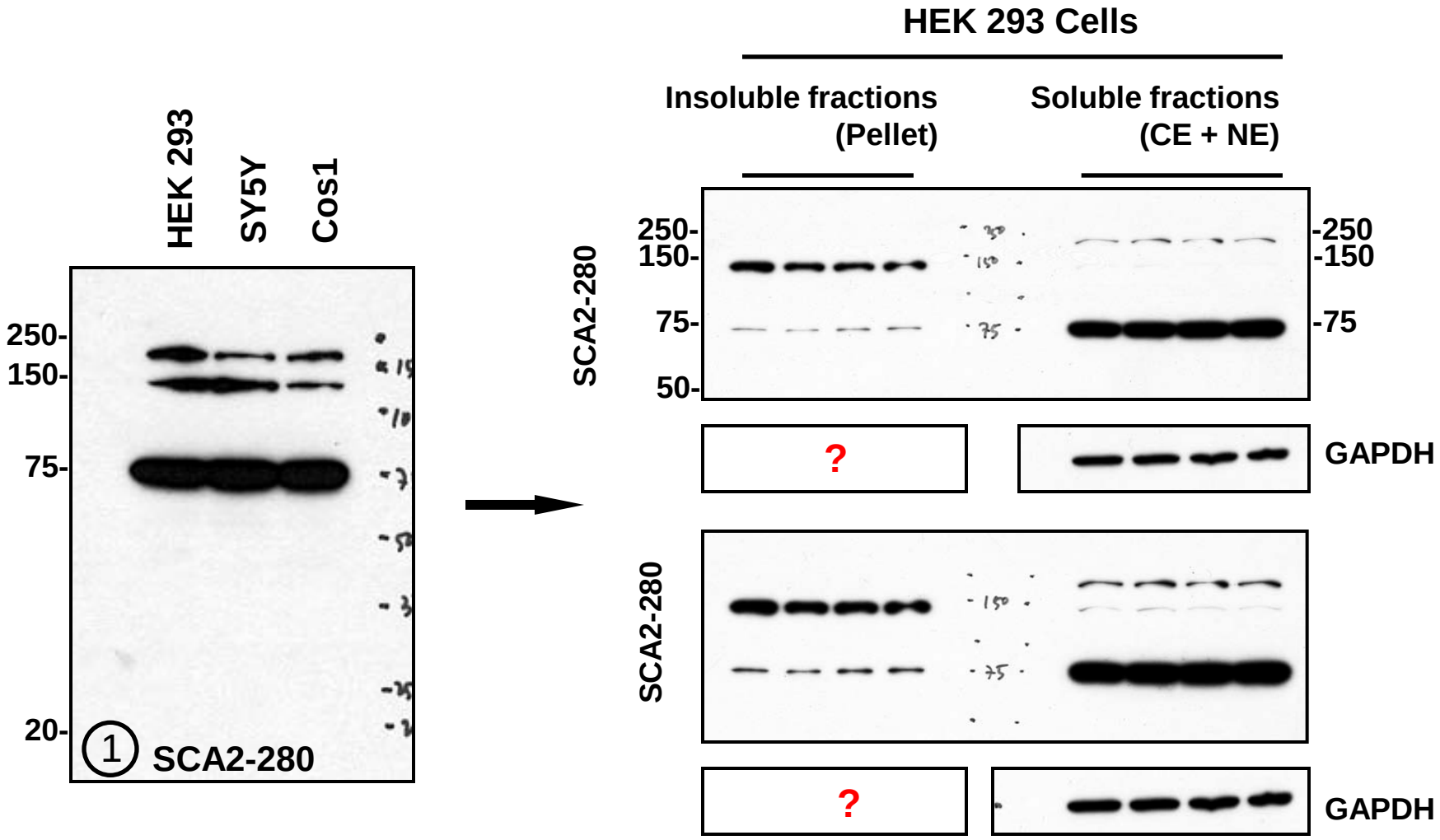
?

The protein bands are separable





Proteins distribution in sub-cellular fractions



1) *Major portion of ATXN2 (?) remain in the insoluble fractions*

2) *Proteins; 75 and >150 kDa proteins are in soluble fractions*

Future Plan

A) Test the specificity of this abs

1) Determine the ATXN2 levels in cells where ATXN2 will be depleted using siRNA

2) Determine the ATXN2 levels in ATXN2 KO mice

B) Test this abs in IP

C) Purification of ATXN2 associated proteins under normal and stress conditions in brain cells (SY5Y cells)

Expression of GFP-polyQ proteins in HEK 293 cells

HEK 293 cells

↓ *Transfection: Plasmids*

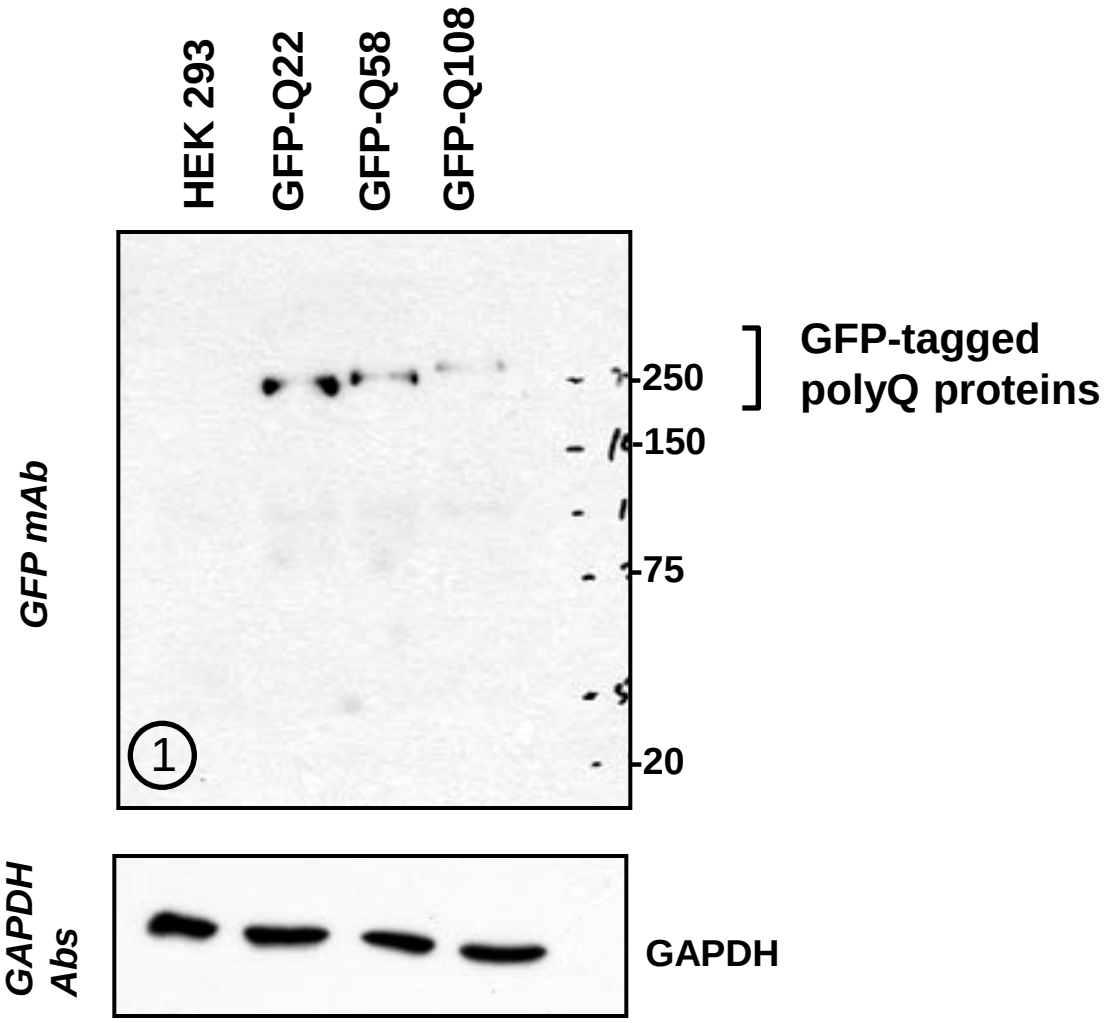
Harvest cells

↓

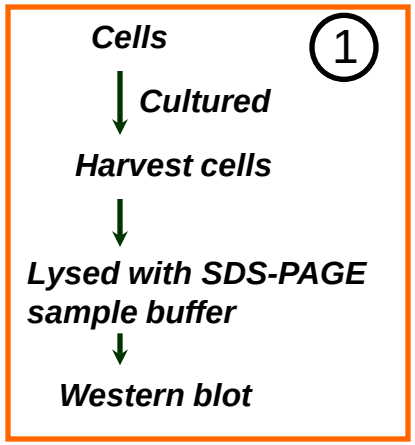
Lysed with SDS-PAGE Sample buffer

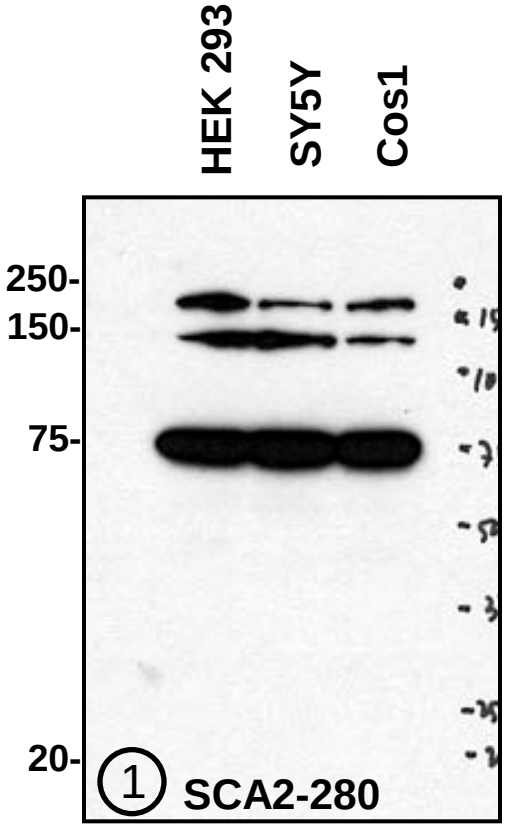
↓

Western blot

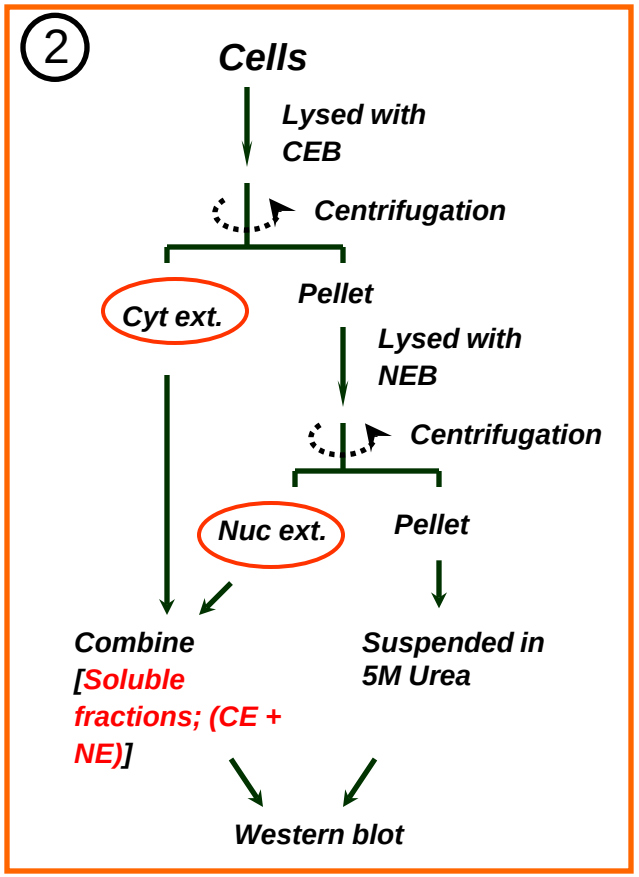


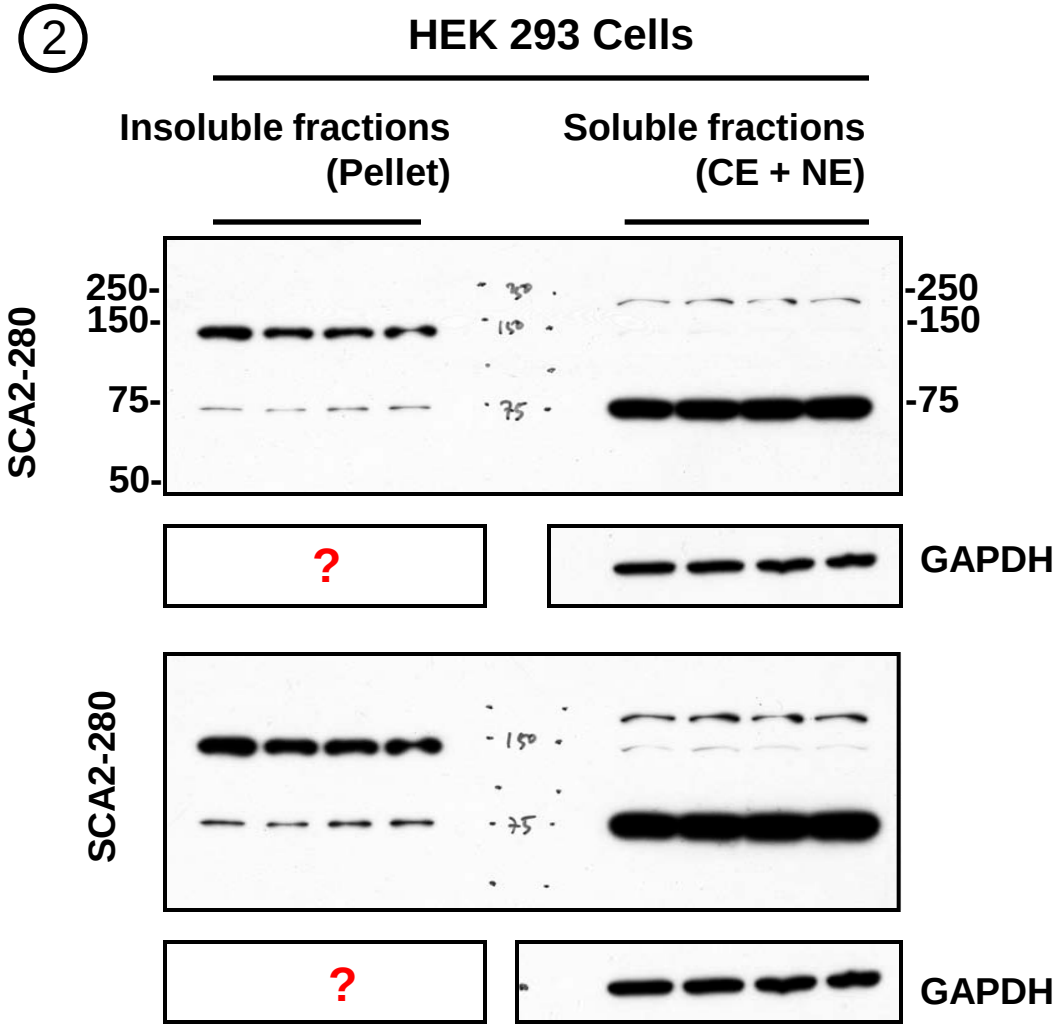
Characterization of SCA2-280 Antibodies





Proteins distribution in sub-cellular fractions





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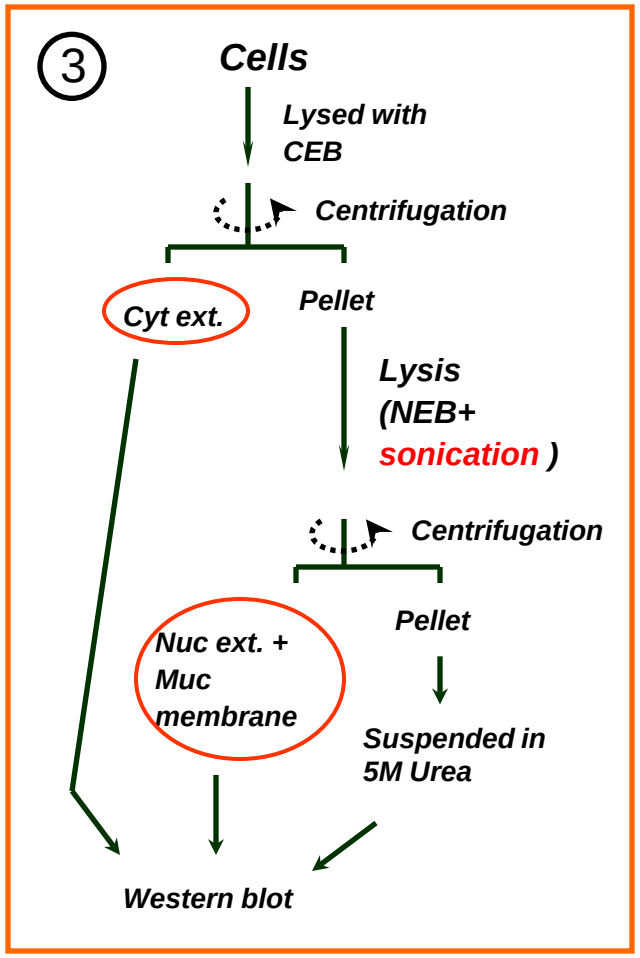

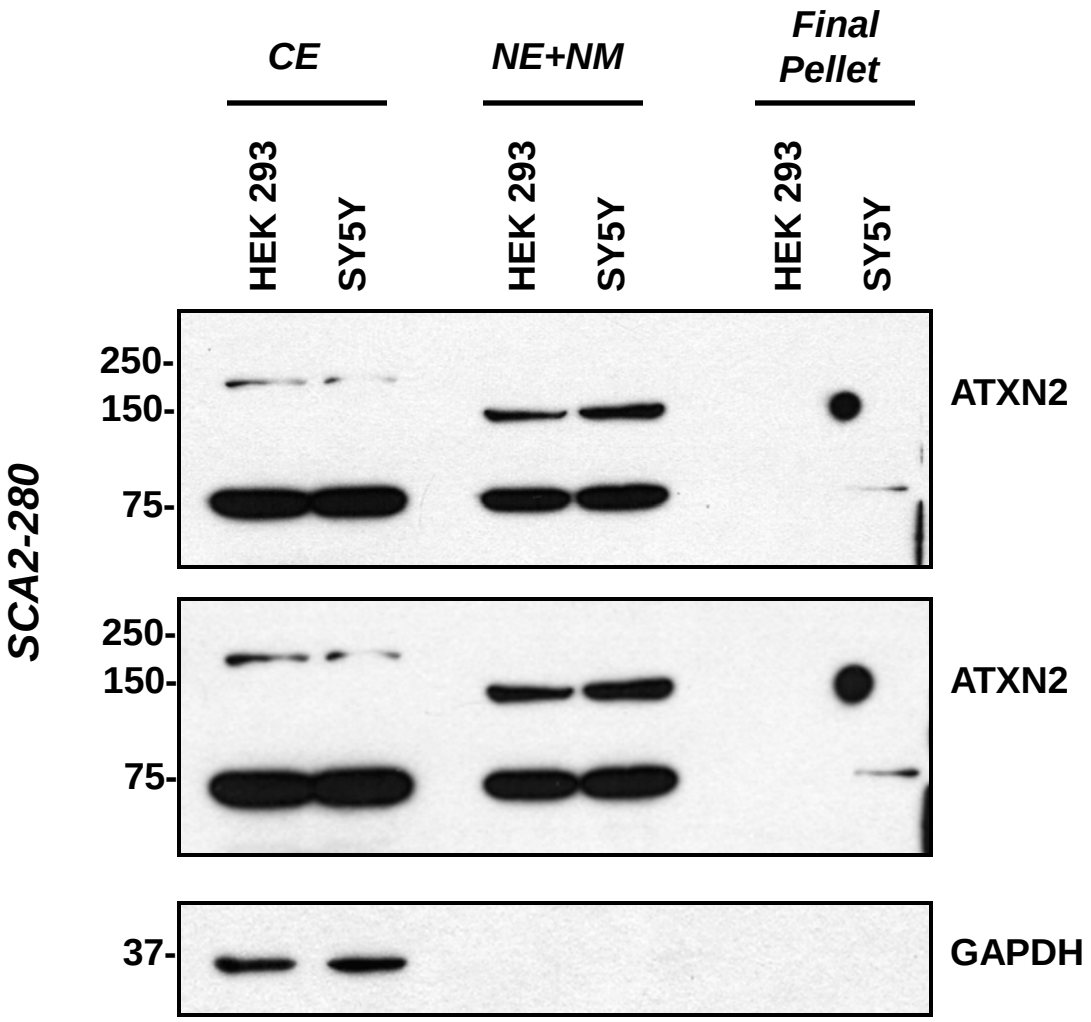

CE, Cytoplasmic Ext.; NE+NM, Nuclear Ext. + Nuclear membrane