NSE2

CONTACT INFORMATION:	Monoclonal Antibodies Unit. Centro Nacional de Investigaciones Oncológicas
STATUS:	Validated
TYPE:	mouse monoclonal
CLONE NAME:	215C
PROTEIN:	E3 SUMO-protein ligase NSE2
PROTEIN WEB:	https://www.uniprot.org/uniprot/Q96MF7
ANTIGEN USED:	NSE2-GST
FUSION PARTNER:	NS1/Ag4-1 (NS1) cells
ISOTYPE:	IgG1
SPECIES REACTIVITY:	Human
PREPARATION AND STORAGE:	Aliquot and store at 4C. Do not freeze

DESCRIPTION

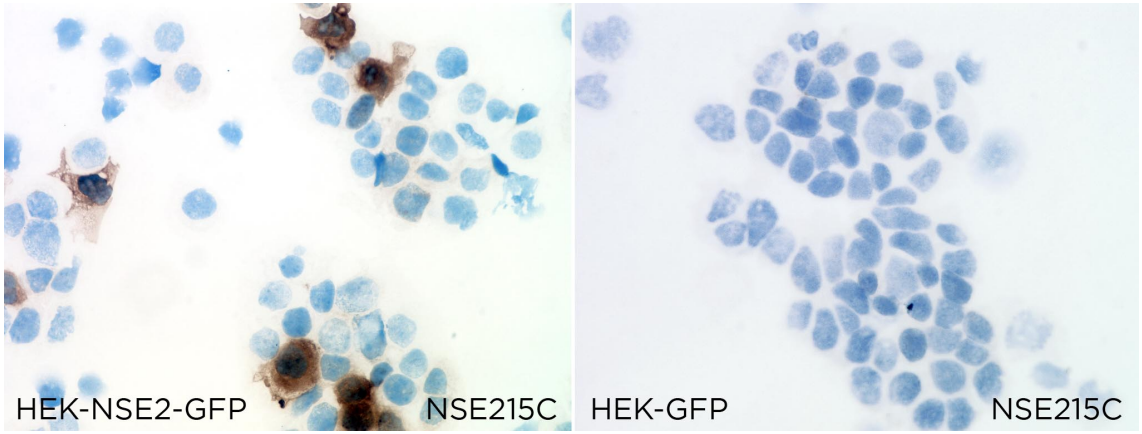
E3 SUMO-protein ligase component of the SMC5-SMC6 complex, a complex involved in DNA double-strand break repair by homologous recombination. Is not be required for the stability of the complex. The complex may promote sister chromatid homologous recombination by recruiting the SMC1-SMC3 cohesin complex to double-strand breaks. The complex is required for telomere maintenance via recombination in ALT (alternative lengthening of telomeres) cell lines and mediates sumoylation of shelterin complex (telosome) components which is proposed to lead to shelterin complex disassembly in ALT-associated PML bodies (APBs). Acts as an E3 ligase mediating SUMO attachment to various proteins such as SMC6L1 and TRAX, the shelterin complex subunits TERF1, TERF2, TINF2 and TERF2IP, and maybe the cohesin components RAD21 and STAG2.

REFERENCES

NSMCE2 suppresses cancer and aging in mice independently of its SUMO ligase activity. Jacome A, Gutierrez-Martínez P, Schiavoni F, Tenaglia E, Martinez P, Rodríguez-Acebes S, Lecona E, Murga M, Méndez J, Blasco MA, Fernandez-Capetillo O. EMBO J. 2015 Nov 3;34(21):2604-19.

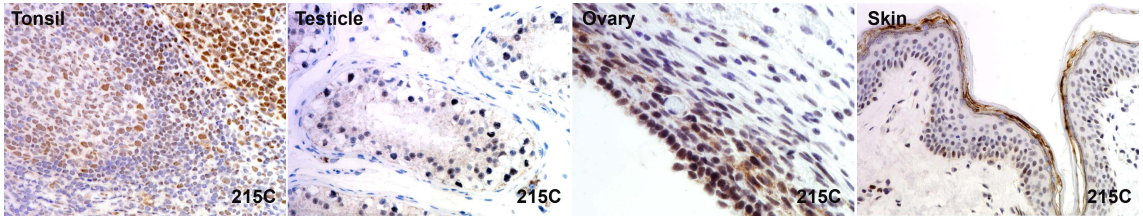
APPLICATIONS

IHC Techniques	Clone	Dilution	Antibody concentration	Antigen retrieval method	Visualization kit	Positive control	Negative control	Protein localization	Positivity in other species
Frozen tissue and cytospins									
Recommended	215C	Neat	supernatant						
Paraffin tissue									
Recommended	215C	1:20	Purified	Tris-EDTA	Novolink	Tonsil		nuclear	
Immunofluorescence									



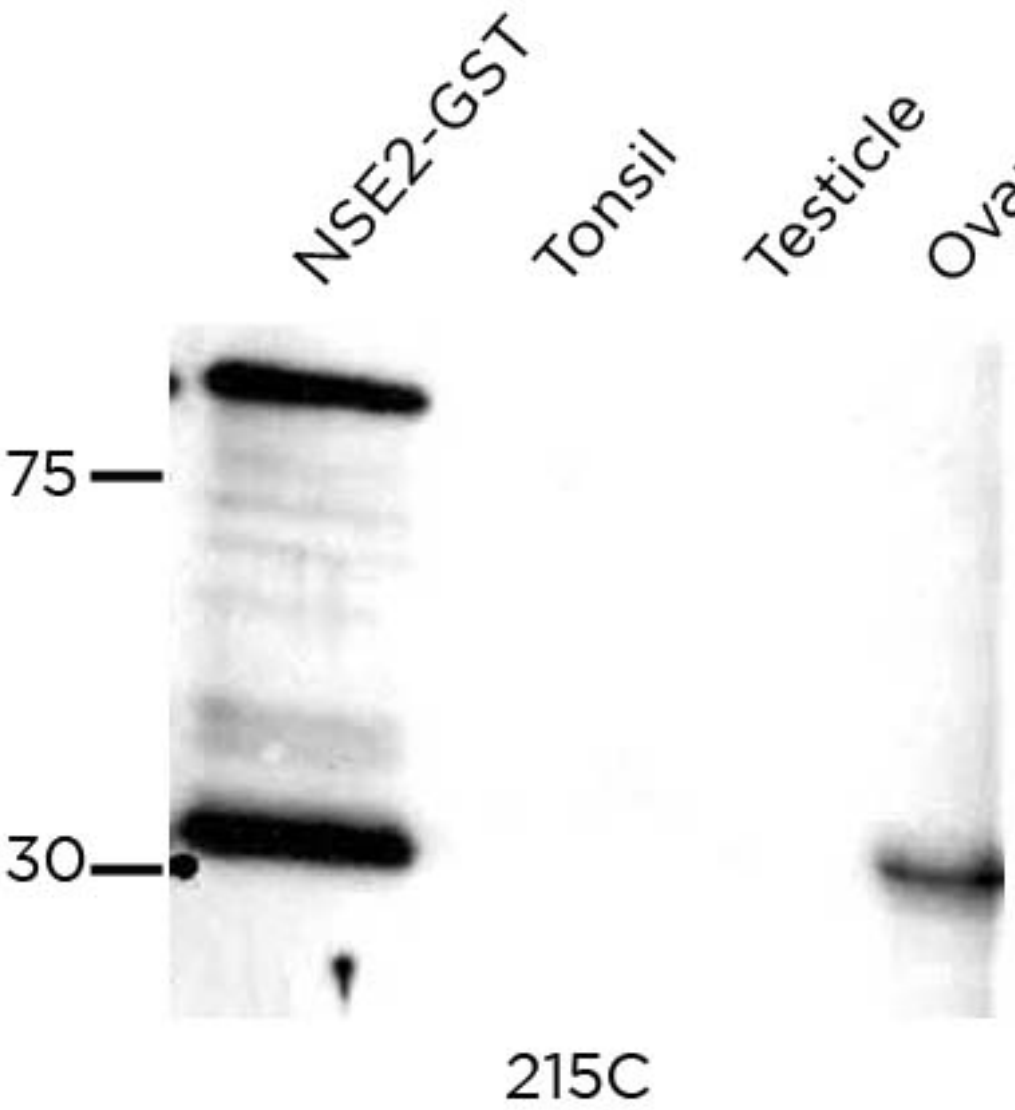
215C is able to detect human NSE2 protein in immunocytochemistry

To confirm that 215C mAb recognizes human NSE2 protein, immunocytochemistry on frozen cytospin preparations of GFP-tagged NSE2 expressed in HEK293T was performed. Cytospin preparation of GFP transfected cells was used as negative control.



215C mAb can be used to detect NSE2 protein in human paraffin tissues

WB Techniques	Clone	Dilution	Antibody concentration	Positive control	Negative control	Expected MW	Observed Mw	Positivity in other species
Western Blotting								
Recommended	215C	Neat	supernatant	Ovary		28kDa	>30kDa	
Immunoprecipitation								



215C mAb is able to detect human NSE2 protein by WB.
LANES

Lane 1 NSE2-GST (0.1ug) (+)

Lane 2 Tonsil (100ug) (-)

Lane 3 Testicle (100ug) (-)

Lane 4 Ovary (100ug) (+)