

## 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

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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, TIN2 and TERF2IP, and maybe the cohesin components RAD21 and STAG2.

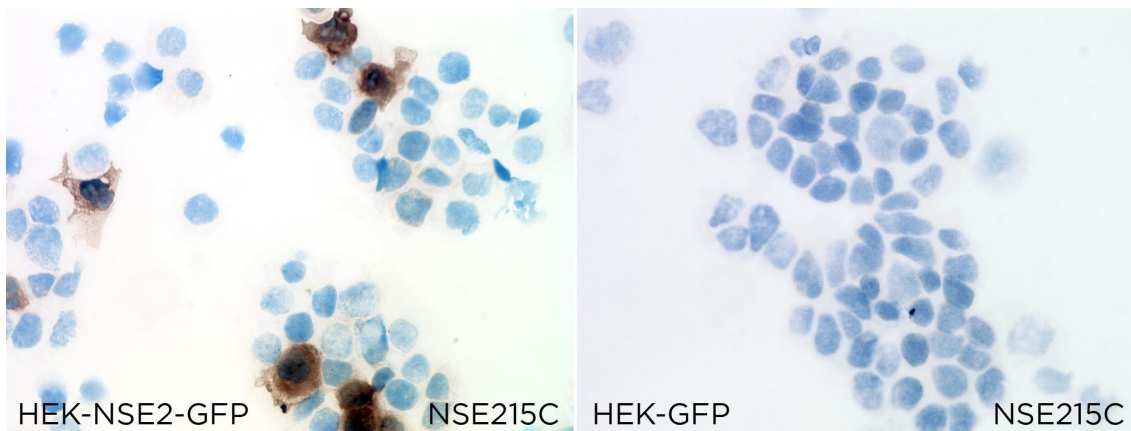
### REFERENCES

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

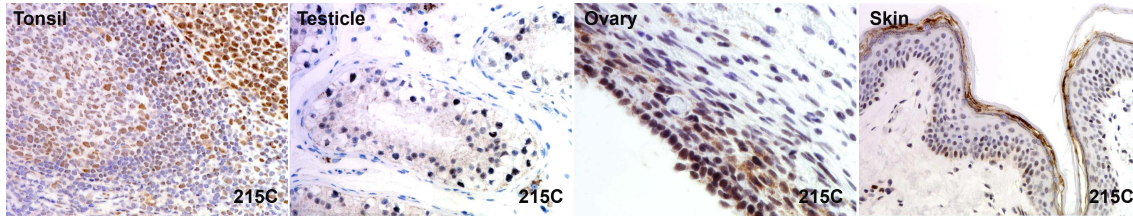
## APPLICATIONS

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



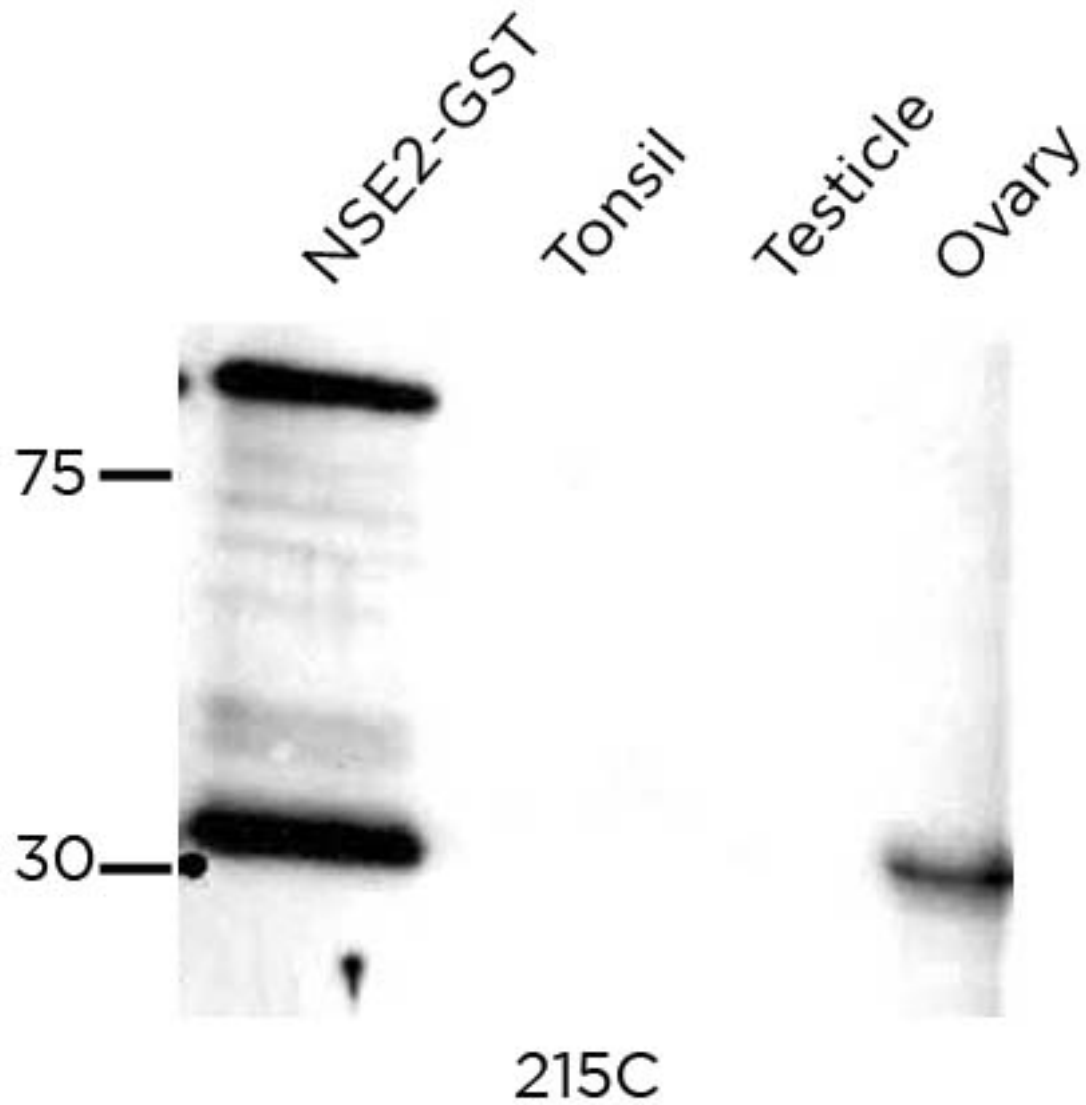
### **215C is able to detect human NSE2 protein in immunocytochemistry**

To confirm that 215C mAb recognizes human NSE2 protein, immunocytochemistry on frozen cytopsin preparations of GFP-tagged NSE2 expressed in HEK293T was performed. Cytopsin 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 |
|----------------------------|-------|----------|------------------------|------------------|------------------|-------------|-------------|-----------------------------|
| <b>Western Blotting</b>    |       |          |                        |                  |                  |             |             |                             |
| Recommended                | 215C  | Neat     | supernatant            | Ovary            |                  | 28kDa       | >30kDa      |                             |
| <b>Immunoprecipitation</b> |       |          |                        |                  |                  |             |             |                             |



**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) (+)