**Supplementary table 1. Antibodies of western blot , ICC/IHC and IP/ChIP.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Reagent | Species Specificity | Company | WB | ICC/IHC | IP/ChIP |
| S100A10S100A10 | Rabbit PolyclonalMouse monoclonal | ProteintechBD Biosciences | 1:1000- | 1:1000- | - |
| 1:50 |
| ANXA2 | Rabbit polyclonal | CST | 1:3000 | 1:1000 | - |
| P-ANXA2 (85.Tyr 24) | Mouse monoclonal | SANTA CRUZ  | 1:500 | - | - |
| SUMO1 | Rabbit polyclonal | CST | 1:1000 | - | - |
| SUMO2/3 | Rabbit monoclonal | CST | 1:1000 | - | - |
| Ubiquitin(linkage-specific K48) | Rabbit monoclonal | Abcam | 1:1000 | - | - |
| PTPRN2 | Rabbit polyclonal | BOSTER | 1:500 | - | - |
| ARHGEF18 | Rabbit polyclonal | Proteintech | 1:500 | - | - |
| DEFA1 | Rabbit polyclonal | Proteintech | 1:500 | - | - |
| β-actin | Mouse monoclonal | Proteintech | 1:1000 | -- | -- |
| GAPDH | Rabbit monoclonal | CST | 1:3000 |