

Purified anti-Centrin 2 (Caltractin) Antibody

Catalog# / Size	698601 / 25 µg 698602 / 100 µg
Clone	W16110A
Regulatory Status	RUO
Other Names	Caltractin isoform 1, CETN2, CALT, CEN2, EF-hand protein 2, 20 kD calcium-binding protein, Centrin-2
Isotype	Rat IgG2b, κ
Description	Centrin, also known as caltractin, was first identified in the green alga <i>Tetraselmis striata</i> and is a member of the highly conserved EF-hand superfamily. Centrins are small calcium binding proteins and play essential roles in the duplication and segregation of microtubule organizing centers (MTOCs). All of the three identified human centrins contain four EF-hand motifs and share high amino acid sequence homology. Human Centrin-1 expression is restricted to male germ cells and retina, while Centrin-2 and Centrin-3 are ubiquitously expressed. In addition to its function in centrosome duplication, Centrin-2 has been found to be present in both cytosol and nucleus. Centrin-2 forms a trimeric complex with the human homolog of Rad23B and the xeroderma pigmentosum group C (XPC) protein. The Centrin-2/Rad23B/XPC complex acts as an essential component of the nucleotide excision repair (NER) pathway.

Product Details

Verified Reactivity	Human, Mouse
Antibody Type	Monoclonal
Host Species	Rat
Immunogen	Human Centrin-2 recombinant protein (full length) expressed in <i>E. coli</i> .
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography.
Concentration	0.5 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C.
Application	WB - Quality tested KO/KD-WB, ICC - Verified
Recommended Usage	Each lot of this antibody is quality control tested by Western blotting . For Western blotting, the suggested use of this reagent is 0.1 - 1.0 µg per ml (1:500 - 1:5000 dilution). For immunocytochemistry, the recommended usage is 0.5 - 2.5 µg per mL (1:100 - 1:500 dilution). It is recommended that the reagent be titrated for optimal performance for each application.
Application Notes	Antibody specificity was confirmed by knock-down of Centrin 2 using siRNA (in-house tested)
RRID	AB_2715793 (BioLegend Cat. No. 698601) AB_2715794 (BioLegend Cat. No. 698602)

Antigen Details

Structure	172 amino acids with a predicted molecular weight of 19.7 kD. Contains four EF-hand domains.
Distribution	Nucleus. Cytoplasm. Centrosome.
Function	Centrin-2 is a calmodulin-related protein involved in the regulation of centrosome duplication and nucleotide excision repair (NER) of DNA.

Interaction Forms the XPC complex with Rad23B and XPC. Interacts with CCP110 and SF11.

Biology Area Cell Biology, Cell Cycle/DNA Replication, DNA Repair/Replication

Antigen References

1. Sawant DB, *et al.* 2015. *Mol Biol Cell.* 26:3741.
2. Ying G, *et al.* 2014. *J Neurosci.* 34:6377.
3. Nishi R, *et al.* 2013. *Nucleic Acids Res.* 41:6917.
4. Boutros R, *et al.* 2011. *Biol Cell.* 103:55.
5. Yang CH, *et al.* 2010. *Mol Biol Cell.* 21:4361.
6. Nishi R, *et al.* 2005. *Mol Cell Biol.* 25:5664.

Gene ID [1069](#)

Related Protocols

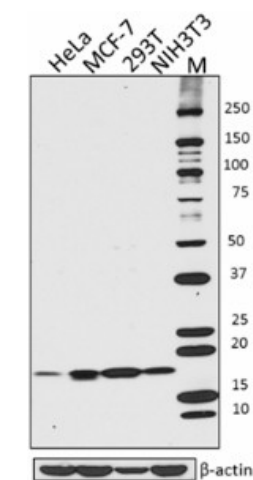
[Immunocytochemistry Staining Protocol](#)

[Western Blotting Protocol](#)

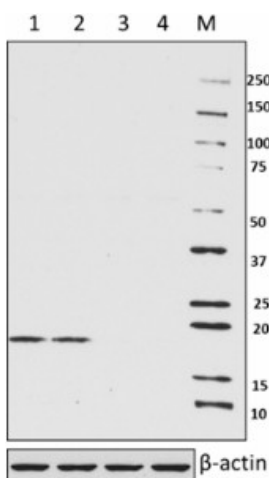
Other Formats

Purified anti-Centrin 2 (Caltractin)

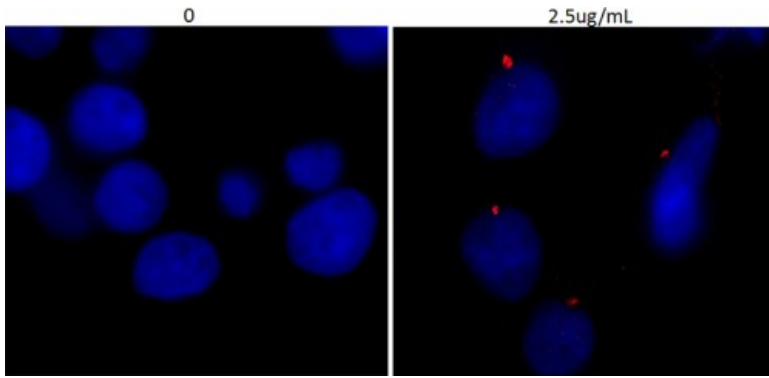
Product Data



Total lysates (15μg protein) from HeLa, MCF-7, 293T and NIH3T3 cells were resolved by electrophoresis (4-20% Tris-glycine gel), transferred to nitrocellulose, and probed with 1:500 diluted (1mg/mL) purified anti-Centrin 2 antibody (clone W16110A) (upper). Proteins were visualized using 1:3000 diluted HRP goat anti-rat IgG secondary antibody (clone Poly4054) and chemiluminescence detection. Direct-Blot™ HRP anti-β-actin Antibody (1:2000 diluted, clone 2F1-1) was used as a loading control (lower). Lane M is the MW ladder.



Total lysates (15μg protein) from 293T (Lane 1), 20nM scrambled siRNA (lane 2), 5nM (Lane 3) and 20nM (Lane 4) Centrin 2 siRNA treated 293T cells were resolved by electrophoresis, transferred to nitrocellulose, and probed with 1:1000 diluted (0.5μg/mL) purified anti-Centrin 2 antibody (upper). Proteins were visualized using 1:3000 diluted HRP goat anti-rat-IgG secondary antibody (clone Poly4054) and chemiluminescence detection. Direct-Blot™ HRP anti-β-actin Antibody (1:2000 diluted, clone 2F1-1) was used as a loading control (lower).



Purified anti-Centrin 2 (Caltractin) Antibody 293T cells were fixed with 4% paraformaldehyde (PFA) for 15 minutes, permeabilized with 0.5% Triton X-100 for 3 minutes, and blocked with 5% FBS for 60 minutes. Then the cells were intracellularly stained with 0 and 1:200 diluted (2.5 $\mu\text{g}/\text{ml}$) anti-Centrin 2 antibody (clone W16110A) overnight at 4 degree followed by 1:200 diluted (2.5 $\mu\text{g}/\text{ml}$) Alexa Fluor® 594 (red) conjugated goat anti-rat IgG (clone Poly4054) incubation for one hour at room temperature. Nuclei were counterstained with DAPI (blue). The image was captured with a 60X objective.

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