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**CLIC4 (D2A7D) Rabbit mAb****Cell Signaling**  
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**For Research Use Only. Not for Use in Diagnostic Procedures.**

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP	H M R Mk	Endogenous	28	Rabbit IgG	#Q9Y696	25932

**Product Usage Information****Application**Western Blotting  
Immunoprecipitation**Dilution**1:1000  
1:50**Storage**

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

**Specificity / Sensitivity**

CLIC4 (D2A7D) Rabbit mAb recognizes endogenous levels of total CLIC4 protein.

**Source / Purification**

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding His111 of human CLIC4 protein.

**Background**

Chloride intracellular channel (CLIC) proteins belong to a family of highly conserved transport proteins found as both soluble and membrane-bound forms (1). Although CLIC proteins have putative, selective chloride ion channel activity, they are structural homologs to members of the glutathione-S-transferase protein superfamily and are likewise regulated by redox status (2). CLIC proteins are distinct from other ion channels in that they are found as both soluble and integral membrane forms, and their form determines their function (3-6). Chloride intracellular channel proteins are ubiquitously expressed in numerous tissue types and are involved in diverse biological functions (1,2).

Chloride intracellular channel 4 (CLIC4) is a well-studied member of the chloride intracellular channel family. Expression of CLIC4 is regulated by p53 and c-Myc, and CLIC4 is required for p53 and c-Myc-mediated apoptosis in some cell types (6,7). CLIC4 contributes to TNF-α mediated apoptosis independent of NF-κB (8). Moreover, CLIC4 regulates the maturation of keratinocytes, differentiation of adipocytes and blood vessel lumen formation (9-12). Research studies show that CLIC4 translocates from the cytoplasm to the nucleus in response to cellular stress (13). In addition, nuclear CLIC4 enhances TGF-β signaling (14). In human cancer tissues, CLIC4 is excluded from the nucleus of tumor cells and its expression is reduced in tumor epithelial tissues (15); conversely, CLIC4 expression is markedly elevated in the adjacent stroma of multiple human cancers. Researchers have shown that high stromal CLIC4 protein levels enhance tumor invasiveness and progression (16).

**Background References**

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**Species Reactivity**

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

**Western Blot Buffer**

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

**Applications Key**

**WB:** Western Blotting **IP:** Immunoprecipitation

**Cross-Reactivity Key**

**H:** human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster  
**X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse  
**GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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