Revision 4

Annexin A2 (D11G2) Rabbit mAb

#8235 Store at -20C

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, W-S, IHC-P, IF-IC, FC-FP	H M R Mk B Pg	Endogenous	38	Rabbit IgG	#P07355	302

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Simple Western™	1:50 - 1:250
Immunohistochemistry (Paraffin)	1:200 - 1:800
Immunofluorescence (Immunocytochemistry)	1:100 - 1:200
Flow Cytometry (Fixed/Permeabilized)	1:50 - 1:200

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.

For a carrier free (BSA and azide free) version of this product see product #71123.

Specificity/Sensitivity

Annexin A2 (D11G2) Rabbit mAb recognizes endogenous levels of total annexin A2 protein. This antibody is not known or predicted to cross-react with other annexin family members.

Species predicted to react based on 100% sequence homology

Dog, Horse

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Phe307 of human annexin A2 protein.

Background

Annexin A2 (ANXA2), also known as lipocortin II or calpactin-1 heavy chain, is a 36 kDa member of the annexin superfamily that binds phospholipids and other proteins in a calcium-dependent manner via annexin repeats (1). Annexin A2 contains four such repeats through which it mediates protein-protein and protein-lipid interactions (1-4). It forms a constitutive heterotetramer with S100A10, acting as a bridge between the actin cytoskeleton, plasma membrane, and endocytotic vesicle machinery (5-7). Originally identified as a protein inhibitor of phospholipase A2, annexin A2 has subsequently been shown to interact with an array of protein and non-protein partners, including F-actin, spectrin, SNARE complexes, RNA, and virus particles (4,6,8,9). Annexin A2 has also been shown to have receptor-like activity and is detected on the surface of macrophages and vascular endothelial cells where it mediates macrophage activation and Factor Xa signaling, respectively (10-13). Upregulation of annexin A2 at the cell surface is thought to be modulated by phosphorylation at Tyr23 by Src (14-18). Interestingly, phosphorylation at Tyr23 has recently been shown to be required for cell surface expression of annexin A2 where it mediates motility, invasiveness, and overall metastatic potential of certain pancreatic cancer cells (19,20). Annexin A2 has also been shown to be heavily phosphorylated on serine residues in response to PKC activation via a pleiotropic mechanism (21-23). For a complete list of curated phosphorylation sites on annexin A2, please see PhosphoSitePlus® at www.phosphosite.org.

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 nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **W-S:** Simple Western™ **IHC-P:** Immunohistochemistry (Paraffin) **IF-IC:** Immunofluorescence (Immunocytochemistry) **FC-FP:** Flow Cytometry (Fixed/Permeabilized)

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Mk:** Monkey **B:** Bovine **Pg:** Pig

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Limited Uses