

#4265 Store at -20°C

STOP (175) Mouse mAb



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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IF-F	H M R	Endogenous	120	Mouse IgG1	#Q7TSJ2	17760

Product Usage Information

Application

Western Blotting

Immunofluorescence (Frozen)

Dilution

1:1000

1:100

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

STOP (175) Mouse mAb detects endogenous levels of total N-STOP and O-STOP proteins.

Source / Purification

Monoclonal antibody is produced by immunizing animals with purified N-STOP from rat brain. The antigen is encoded by exon 4 (Galiano et al., 2004).

Background

Stable Tubule Only Polypeptide (STOP) is a microtubule-associated protein, and its microtubule-stabilizing activity is regulated by calmodulin (1-2). STOPs have several tissue- and developmental-specific isoforms that are encoded by a single gene. Neurons express N-STOP (exons 1-4) and E-STOP (exons 1-3), fibroblasts express F-STOP (exons 1-2), oligodendrocytes express O-STOP, and astrocytes A-STOP (3). STOPs are the major contributors stabilizing microtubules that resist depolymerization due to cold or depolymerizing drugs. STOP knock-out mice display impaired synaptic plasticity associated with severe behavioral disorders in contrast to the anticipated neuronal development and brain anatomy defects (4).

Background References

1. Bosc, C. et al. (1996) *Proc Natl Acad Sci USA* 93, 2125-30.
2. Bosc, C. et al. (2001) *J Biol Chem* 276, 30904-13.
3. Galiano, M.R. et al. (2004) *J Neurosci Res* 78, 329-37.
4. Andrieux, A. et al. (2002) *Genes Dev* 16, 2350-64.

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 **IF-F:** Immunofluorescence (Frozen)

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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