Revision 1

Store at -20C

#13776

KISS1R (D9D7C) Rabbit mAb

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP	H	Endogenous	40-140	Rabbit IgG	#Q969F8	84634

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	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

KISS1R (D9D7C) Rabbit mAb recognizes endogenous levels of total KISS1R protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human KISS1R protein.

Background

The KiSS-1 receptor (KISS1R, GPR54) is a G protein-coupled receptor that inhibits cancer cell metastasis and plays a major role in gonadotropic axis physiology (1). The GPR54 protein was originally described as an orphan receptor homologous to the galanin receptor, and later identified as a receptor for amidated peptide products of the metastasis suppressor gene *KiSS-1* (*KISS1*, Kisspeptin-1) (2,3). In humans, amidated kisspeptin ligands are produced predominantly in cells of the arcuate nucleus and preoptic area, with expression controlled by gonadal hormones (4). Research studies show that deletion of either the KiSS-1 receptor or *KiSS-1* gene leads to hypogonadotropic hypogonadism, a disorder characterized by reduced levels of circulating testosterone and gonadotropins, as well as abnormal sexual maturation (5,6). The administration of kisspeptins potently stimulates gonadotropin secretion, indicating that KISS1R and kisspeptins play a major role in the physiology of the gonadotropic axis (7). Additional research demonstrates that KISS1R and kisspeptins inhibit metastasis in cancer cells by inhibiting cell motility (8). However, other studies indicate that increased expression of KISS1R and its ligands in human breast tumors correlates with higher tumor grade and metastatic potential, likely by engaging MMP-9 activation via transactivation of EGFR (9).

Background References

1. Beck, B.H. and Welch, D.R. (2010) *Eur J Cancer* 46, 1283-9.
2. Lee, D.K. et al. (1999) *FEBS Lett* 446, 103-7.
3. Ohtaki, T. et al. (2001) *Nature* 411, 613-7.
4. Lehman, M.N. et al. (2010) *Brain Res* 1364, 90-102.
5. de Roux, N. et al. (2003) *Proc Natl Acad Sci U S A* 100, 10972-6.
6. d'Anglemont de Tassigny, X. et al. (2007) *Proc Natl Acad Sci U S A* 104, 10714-9.
7. Gottsch, M.L. et al. (2004) *Endocrinology* 145, 4073-7.
8. Cho, S.G. et al. (2012) *Cancer Metastasis Rev* 31, 585-91.
9. Zajac, M. et al. (2011) *PLoS One* 6, e21599.

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

W: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: Human

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