ARG23667
anti-DLL4 antibody [HMD4-2] (PE)

Package: 100 tests
Store at: 4°C

Summary

Product Description	PE-conjugated Hamster Monoclonal antibody [HMD4-2] recognizes DLL4. This product specifically recognizes mouse Delta-like protein 4 (DLL4), one of the five major ligands of the Notch signalling pathway, which is activated through the binding of specific ligands to the Notch receptors Notch 1-4.The Notch signalling pathway is an evolutionarily conserved pathway in multi-cellular organisms, which is vital for cell-cell communication, important during fundamental developmental and physiological processes, including regulation of cell fate decisions during neuronal, cardiac and endocrine development, stem cell haematopoiesis, thymic T-cell development, and both tumour progression and suppression. Ligation of Notch receptors by their specific ligands, Jagged1 (CD339), Jagged2, Delta like-1 (DLL1), DLL3 and DLL4, on physically adjacent signal receiving cells, induces proteolysis of the receptors by ADAM-family metalloproteases and gamma-secretase complex, within the transmembrane domain, releasing the Notch intracellular domain (NICD) to translocate to the nucleus. Subsequent signal transduction then occurs through either the CSL-NICD-Mastermind complex cascade (canonical pathway), or NF-kappaB-NICD and CSL-NICD-Deltex complex signalling cascades (non-canonical pathway). The canonical pathway inhibits the differentiation of stem cells or progenitor cells, whilst the non-canonical pathway promotes differentiation. DLL4 is expressed by vascular endothelium, and plays a vital role in embryonic vascular development. DLL4 signalling has been shown to play a role in the angiogenesis of clear-cell renal tumours, and pancreatic, bladder and colonic cancer. Studies have shown that DLL4 expression in endothelium cells, can be up-regulated by vascular endothelial growth factor (VEGF) and basic-FGF, and by HIF1 alpha, and that blockade of DLL4 inhibits tumour growth by promoting non-productive angiogenesis.
Tested Reactivity	Ms
Tested Application	FACS
Host	Hamster
Clonality	Monoclonal
Clone	HMD4-2
Isotype	IgG
Target Name	DLL4
Species	Mouse
Immunogen	Recombinant Mouse DLL4.
Conjugation	PE
Alternate Names	Drosophila Delta homolog 4; hdelta2; Delta4; Delta-like protein 4

Application Instructions

Application table

Application	Dilution
FACS	Neat

Application Note

FACS: Use 10 µl of the suggested working dilution to label 10^6 cells in 100 µl.
* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

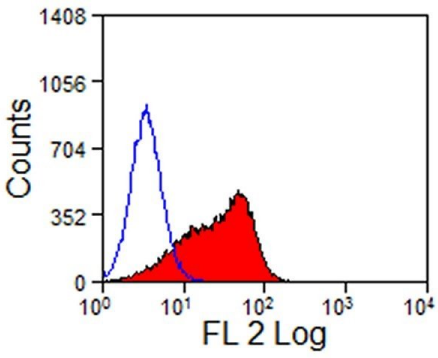
Properties

Form	Liquid
Purification	Purification with Protein G.
Buffer	PBS, 0.09% Sodium azide, 1% BSA and 5% Sucrose.
Preservative	0.09% Sodium azide
Stabilizer	1% BSA and 5% Sucrose
Storage instruction	Aliquot and store in the dark at 2-8°C. Keep protected from prolonged exposure to light. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Gene Symbol	DLL4
Gene Full Name	delta-like 4 (Drosophila)
Background	This gene is a homolog of the Drosophila delta gene. The delta gene family encodes Notch ligands that are characterized by a DSL domain, EGF repeats, and a transmembrane domain. [provided by RefSeq, Jul 2008]
Function	Involved in the Notch signaling pathway as Notch ligand. Activates NOTCH1 and NOTCH4. Involved in angiogenesis; negatively regulates endothelial cell proliferation and migration and angiogenic sprouting. Essential for retinal progenitor proliferation is required for suppressing rod fates in late retinal progenitors as well as for proper generation of other retinal cell types. During spinal cord neurogenesis, inhibits V2a interneuron fate. [UniProt]
Calculated Mw	75 kDa

Images



ARG23667 anti-DLL4 antibody [HMD4-2] (PE) FACS image

Flow Cytometry: Mouse Delta like protein 4 transfected cells stained with ARG23667 anti-DLL4 antibody [HMD4-2] (PE).