

Polyclonal Antibody to DR5/Apo2/TRAIL-R2/TRAILR2/TRICK2/KILLER



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Polyclonal Antibody to DR5/Apo2/TRAIL-R2/TRAILR2/TRICK2/KILLER

Catalog No : IMG-120E
Formulation : 0.1 mg in 0.2 ml filter-sterilized PBS. Sodium azide free.
Isotype : Rabbit IgG
Purification : Protein G Chromatography
Species React : Human
Host : Rabbit

Application
Western blot analysis: 5 ug/ml
Flow (Cell Surface): As reported in KOYAMA (2003)
IF/ICC: As reported in Georgakis et al. (2005)
IHC (paraffin): As reported in Younes et al. (2006)
Storage
Aliquot and store frozen at -20°C.

Recommended Positive Control: HL60 or Jurkat

Background

Apoptosis is induced by certain cytokines including TNF and Fas ligand in the TNF family through their death domain containing receptors. TRAIL/Apo2L is a new member of the TNF family. DR4 was recently identified as the receptor for TRAIL. A novel death domain containing receptor for TRAIL was more recently identified and designated DR5, Apo2, TRAIL-R2, TRICK2, or KILLER by several groups independently (1-2). Like DR4, DR5 transcript is widely expressed in normal tissues and in many types of tumor cells. DR5 binds to TRAIL and mediates TRAIL induced cell death. Overexpression of DR5 induces apoptosis and activates NF-kB.

Antigen

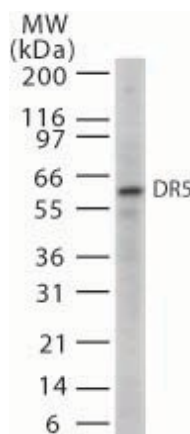
Rabbit anti-DR5 polyclonal antibody was raised against a peptide corresponding to amino acids 388 to 407 (isoform 2) of human DR5 precursor (1,2). The same sequence is found in isoform 1 at amino acids 417-436.

Application Notes

****Please note that this product is now being supplied at 0.5 mg/ml.**

Genebank Info (Protein)

NP_042999



Western blot analysis of 20 µg of whole cell lysates from HL60 cells with anti-DR5 at 5 ug/ml.

Related Products

1. IMG-5142A [Polyclonal Antibody to beta Actin]
2. 40162 [Jurkat cell line lysate (T cell leukemia)]
3. 40169 [HL60 cell line lysate (promyelocytic cell line)]
4. IMG-5143A [Polyclonal Antibody to GAPDH]

Reference

1. Pan G, Ni J, Wei YF, Yu G, Gentz R, Dixit VM. An antagonist decoy receptor and a death domain-containing receptor for TRAIL. *Science* 1997;277:815-8
2. Sheridan JP, Marsters SA, Pitti RM, Gurney A, Skubatch M, Baldwin D, Ramakrishnan L, Gray CL, Baker K, Wood WI, Goddard AD, Godowski P, Ashkenazi A. Control of TRAIL-induced apoptosis by a family of signaling and decoy receptors. *Science* 1997;277:818-21

Product Citations

Polyclonal Antibody to DR5/Apo2/TRAIL-R2/TRAILR2/TRICK2/KILLER

1. **c-Jun NH2-Terminal Kinase-Mediated Up-regulation of Death Receptor 5 Contributes to Induction of Apoptosis by the Novel Synthetic Triterpenoid Methyl-2-Cyano-3,12-Dioxooleana-1,9-Dien-28-Oate in Human Lung Cancer Cells.** Wei Zou, Xiangguo Liu, Ping Yue, Zhongmei Zhou, Michael B. Sporn, Reuben Lotan, Fadlo R. Khuri, and Shi-Yong Sun. *Cancer Res.*, 64: 7570-7578 (2004).
2. **Down-Regulation of the erbB-2 Receptor by Trastuzumab (Herceptin) Enhances Tumor Necrosis Factor-related Apoptosis-inducing Ligand-mediated Apoptosis in Breast and Ovarian Cancer Cell Lines that Overexpress erbB-2.** Mauricio Cuello, Seth A. Ettenberg, Amy S. Clark, Maccon M. Keane, Reuben H. Posner, Marion M. Nau, Phillip A. Dennis, and Stan Lipkowitz. *Cancer Res.*, 61: 4892-4900 (2001).
3. **Targeting Bcl-xL in esophageal squamous cancer to sensitize to chemotherapy plus TRAIL-induced apoptosis while normal epithelial cells are protected by blockade of caspase 9.** K Kim, H Nakagawa, P Fei, A K Rustgi, W S El-Deiry. *Cell Death and Differentiation* advance online publication Letter to Editor (2004).
4. **Molecular Determinants of Response to TRAIL in Killing of Normal and Cancer Cells.** Kunhong Kim, Michael J. Fisher, Shi-Qiong Xu, and Wafik S. El-Deiry. *Clin. Cancer Res.*, 6: 335-346 (2000).
5. **Expression of TNF-related apoptosis-inducing ligand (TRAIL) and its receptors in gastric carcinoma and tumor-infiltrating lymphocytes: a possible mechanism of immune evasion of the tumor.** Shohei Koyama, Naoto Koike and Shinya Adachi. *J Cancer Res Clin Oncol* 128: 73-97 (2002).
6. **Involvement of Proapoptotic Molecules Bax and Bak in Tumor Necrosis Factor-related Apoptosis-inducing Ligand (TRAIL)-induced Mitochondrial Disruption and Apoptosis: Differential Regulation of Cytochrome c and Smac/DIABLO Release.** Karthikeyan Kandasamy, Srinivasa M. Srinivasula, Emad S. Alnemri, Craig B. Thompson, Stanley J. Korsmeyer, Joseph L. Bryant, and Rakesh K. Srivastava. *Cancer Research* 63, 1712-1721(2003).
7. **Deficient Tumor Necrosis Factor-related Apoptosis-inducing Ligand (TRAIL) Death Receptor Transport to the Cell Surface in Human Colon Cancer Cells Selected for Resistance to TRAIL-induced Apoptosis.** Zhaoyu Jin, E. Robert McDonald, III, David T. Dicker, and Wafik S. El-Deiry. *J. Biol. Chem.*, 279: 35829-35839 (2004).
8. **The Transcriptosomal Response Of Human A549 Lung Cells To A Hydrogen Peroxide-Generating System: Relationship To Dna. Damage, Cell Cycle Arrest, And Caspase Activation.** Tiziana Dandrea, Heike Hellmold, Carina Jonsson, Boris Zhivotovsky, Tim Hofer, Lars Wa Rnga Rd, Y And Ian Cotgreave. *Free Radical Biology & Medicine*, Vol. 36, No. 7, pp. 881-896 (2004).
9. **Tissue specific expression of p53 target genes suggests a key role for KILLER/DR5 in p53-dependent apoptosis in vivo.** Timothy F Burns, Eric J Bernhard, Wafik S El-Deiry. *Oncogene* 20, 4601-4612 (2001).
10. **The Cytokines Tumor Necrosis Factor- α (TNF- α) and TNF-related Apoptosis-inducing Ligand Differentially Modulate Proliferation and Apoptotic Pathways in Human Keratinocytes Expressing the Human Papillomavirus-16 E7 Oncoprotein.** John R. Basile, Valerie Zacny, and Karl M \ddot{u} nger. *J. Biol. Chem.*, 276: 22522-22528 (2001).
11. **Hepatic DR5 Induces Apoptosis and Limits Adenovirus Gene Therapy Product Expression in the Liver.** Huang-Ge Zhang, Jinfu Xie, Liang Xu, Pingar Yang, Xin Xu, Sheher Sun, Yongming Wang, David T. Curiel, Hui-Chen Hsu, and John D. Mountz. *J. Virology*, 76 (11): 5692-5700 (2002).
12. **Mifepristone Pretreatment Overcomes Resistance of Prostate Cancer Cells to Tumor Necrosis Factor -related Apoptosis-inducing Ligand (TRAIL).** Manal A. Eid, Ronald W. Lewis, and M. Vijay Kumar. *Mol. Cancer Ther.* 1: 831-840 (2002).
13. **Synergistic antitumor activity of TRAIL combined with chemotherapeutic agents in A549 cell lines in vitro and in vivo.** Qing-Lin Fan1, Wen-Yi Zou3, Li-Hua Song and Wei Wei. *Cancer Chemotherapy and Pharmacology*. Volume 55 (2): 189-196 (2005).
14. **HELICOBACTER PYLORI INFECTION: ITS EFFECTS AND TREATMENT: Flow cytometric measurement of tumor necrosis factor-related apoptosis-inducing ligand and its receptors in gastric epithelium and infiltrating mucosal lymphocytes in Helicobacter pylori.** SHOHEI KOYAMA. *Journal of Gastroenterology and Hepatology* 18: 763-770 (2003). (Flow)
15. **Activity of selective fully human agonistic antibodies to the TRAIL death receptors TRAIL-R1 and TRAIL-R2 in primary and cultured lymphoma cells: induction of apoptosis and enhancement of doxorubicin- and bortezomib-induced cell death.** Georgios V. Georgakis, Yang Li, Robin Humphreys, Michael Andreeff, Susan O'Brien, Mamoun Younes, Antonino Carbone, Vivian Albert and Anas Younes. *British Journal of Haematology*, 130: (4): 501 (2005). (ICC: cytopins)
16. **3,3'-Diindolylmethane (DIM) and derivatives induce apoptosis in pancreatic cancer cells through endoplasmic reticulum stress-dependent upregulation of DR5.** Abdelrahim M, K Newman, K Vanderlaag, I Samudio, and S Safe. *Carcinogenesis*, Dec 2005; 10.1093/carcin/bgi270. **IMGENEX antibodies cited: 1. ATF6 (IMG-273) 2. DR5 (IMG-120) [WB, Fig.4 and Fig. 6 (Panc-28 cells)].**
17. **Functional expression of TRAIL receptors TRAIL-R1 and TRAIL-R2 in esophageal adenocarcinoma.** Mamoun Younes, Georgios V. Georgakis, Mahdis Rahmani, David Beer and Anas Younes. *European Journal of Cancer*, 42:542-547 (2006). (IHC-paraffin: formalin-fixed, paraffin-embedded tissue sections and cell lines), (WB: cell lines), (Flow-cell surface: cell lines)

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