

KS128		Anti Human CD71 (TFRC) Monoclonal Antibody (Clone No. YUK9)	
Primary Source	HGNC:11763	Application	
Type	Monoclonal	WB	Not tested
Immunogen	Human Cancer Cell Line	IHC	Not tested
Raised in	Mouse	ICC	Not tested
Myeloma	P3U1	ELISA	Not tested
Clone number	YUK9	FCM	1.0-5.0 µg/mL
Isotype	IgG1, κ	Neutralization	Not tested
Source	Serum Free Medium	IP	5.0-10.0 µg/mL
Purification notes	ProteinG		
Cross Reactivity	Not yet tested in other species.		
Concentration	0.25 mg/mL		
Contents (Volume)	50 µg (200 µL/vial)		
Label	Unlabeled		
Buffer	PBS [containing 2 % Block Ace as a stabilizer, 0.1 %Proclin as a bacteriostat]		
Storage	Store below -20 . Once thawed, store at 4 . Repeated freeze-thaw cycles should be avoided.		

#### Note

CD71 (also known as TFRC: transferrin receptor) is a widely expressed 180 kDa type II membrane glycoprotein involved in the cellular uptake of iron and in the regulation of cell growth. Iron uptake occurs via the internalization of iron-loaded transferrin mediated by the interaction with the CD71. CD71 expression is increased on rapidly proliferating cells, while expression is decreased or absent on non-dividing cells. Some studies have suggested that biologically aggressive tumors require large amounts of iron for active metabolism and rapid cell growth, and overexpression of CD71 has reported in different types of cancers such as glioma, pancreatic, and colon cancers.

In addition, CD71 is required for adult erythropoiesis and involved in T- and B- cell development. CD71 seems to play an important role in T cell activation, and T cells lacking CD71 are completely arrested at a very early stage of maturation.

This antibody is specific to human CD71 and will be useful for FCM, immunoprecipitation.

CD71 (TFRC: transferrin receptor) は、生体内で幅広く発現している180 kDa のII型膜糖タンパク質で、鉄イオンの細胞内への取り込みや細胞の成長に役割を果たしています。CD71 は、赤血球形成やT細胞、B細胞の発達に関与し、特にT細胞の活性化に重要な役割を果たしており、CD71 欠損T細胞は初期で成熟が停止することが明らかとなっています。増殖能が高い細胞ではCD71は発現が増加し、非分裂細胞では減少もしくは見られませんが、また、活性化された代謝や急速な成長に伴い多くの鉄イオンを必要としているため、グリオーマ、膵臓癌、大腸癌などでCD71 が過剰発現していることが示されています。本抗体はヒトCD71 に特異的な抗体であり、FCM、免疫沈降に使用できます。

#### Reference

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| 1 | Bayer AL. et al.:<br>Transferrin receptor in T cell activation and transplantation.   | J Leukoc Biol.<br>1998 Jul;64(1):19-24.                                       |
| 2 | Ned RM. et al.:<br>Transferrin receptor 1 is differentially required in lymphocyte development.   | Blood.<br>2003 Nov 15;102(10):3711-8. Epub 2003 Jul 24.                       |
| 3 | Högemann-Savellano D. et al.:<br>The transferrin receptor: a potential molecular imaging marker for human cancer.   | Neoplasia.<br>2003 Nov-Dec;5(6):495-506.                                      |
| 4 | Moura IC. et al.:<br>A neutralizing monoclonal antibody (mAb A24) directed against the transferrin receptor induces apoptosis of tumor T lymphocytes from ATL patients. | Blood.<br>2004 Mar 1;103(5):1838-45. Epub 2003 Oct 30.                        |
| 5 | Kasibhatla S. et al.:<br>A role for transferrin receptor in triggering apoptosis when targeted with gambogic acid.  | Proc Natl Acad Sci U S A.<br>2005 Aug 23;102(34):12095-100. Epub 2005 Aug 15. |

#### WARNING AND PRECAUTION

- Not for diagnostic use. The safety and efficacy of product in diagnostic or other clinical uses has not been established.
- Harmful by inhalation, in contact with skin and if swallowed. Do not breathe dust. Avoid contact with skin and eyes.
- If contact with skin and eyes, wash all affected areas with large volume of water. If inhaled remove to fresh air. In severe case obtain medical attention.
- Wash hand thoroughly after handling the product.
- Do not use this product if container is broken or some contaminants are detected.
- When preserving the product, Close the container, ensure it does not fall aside or down.
- Dispose of the container and expired reagents in accordance with federal, state and local government regulations.
- Do not use the container and accessories of the product for other purpose.

#### 取り扱い上の注意

この添付文書をよく読んでから使用して下さい。

- 本品は研究用試薬であり、医薬品その他の目的にはご使用になれません。
- 取り扱い中は皮膚、粘膜、着衣に触れたり、目に入らないように適切な措置を行って下さい。
- 試薬が誤って目や口に入った場合には、水で十分に洗い流すなどの応急処置を行い、必要があれば医師の手当を受けて下さい。
- 取り扱い後には手洗いを十分に行ってください。
- 容器の破損、異物混入等異常が認められた物は使用しないで下さい。
- 試薬を保管する場合は、蓋をし、転倒落下防止を確実にし、指定の貯蔵方法で保管して下さい。
- 使用後の容器は、廃棄物に関する規定に従って処理して下さい。
- 容器、付属品等の他目的への転用は保証できません。