Anti-alpha smooth muscle Actin Antibody [SY02-64] IRS012

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	mIHC
Molecular Wt:	Predicted band size: 42 kDa
Clone number:	SY02-64

Description: All eukaryotic cells express Actin, which often constitutes as much as 50% of total cellular protein. Actin filaments can form both stable and labile structures and are crucial components of microvilli and the contractile apparatus of muscle cells. While lower eukaryotes, such as yeast, have only one Actin gene, higher eukaryotes have several isoforms encoded by a family of genes. At least six types of Actin are present in mammalian tissues and fall into three classes. α-Actin expression is limited to various types of muscle, whereas β-Actin and γ-Actin are the principle constituents of filaments in other tissues. Members of the small GTPase family regulate the organization of the Actin cytoskeleton. Rho controls the assembly of Actin stress fibers and focal adhesion. Rac regulates Actin filament accumulation at the plasma membrane. Cdc42 stimulates formation of filopodia.

Immunogen: Synthetic peptide within N-terminal human alpha smooth muscle Actin.

Positive control: Human tonsils tissue, human lung squamous cell carcinoma tissue.

Subcellular location: Cytoplasm.

Database links: SwissProt: P62736 Human

Recommended Dilutions:

mIHC	1:100

Storage Buffer: PBS (pH7.4), 0.1% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Store at +4℃ after thawing. Aliquot store at -20℃ or -80℃. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

Images

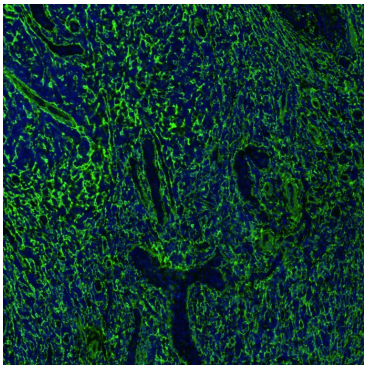

Fig1: mIHC analysis of human tonsils tissue (Formalin/PFA-fixed paraffin-embedded sections) with Rabbit anti-alpha smooth muscle Actin antibody (IRS012) at 1/100 dilution. The immunostaining was performed with the IRISKit® HyperView mTSA Kit (MH900206). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 30 mins at 95℃. DAPI (blue) was used as a nuclear counter stain. Image acquisition was performed with Olympus VS200 Slide Scanner.

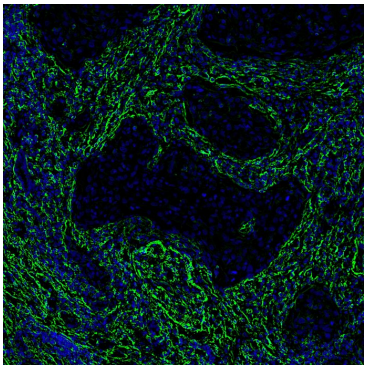

Fig2: mIHC analysis of human lung squamous cell carcinoma tissue (Formalin/PFA-fixed paraffin-embedded sections) with Rabbit anti-alpha smooth muscle Actin antibody (IRS012) at 1/100 dilution. The immunostaining was performed with the IRISKit® HyperView mTSA Kit (MH900206). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 30 mins at 95℃. DAPI (blue) was used as a nuclear counter stain. Image acquisition was performed with Olympus VS200 Slide Scanner.

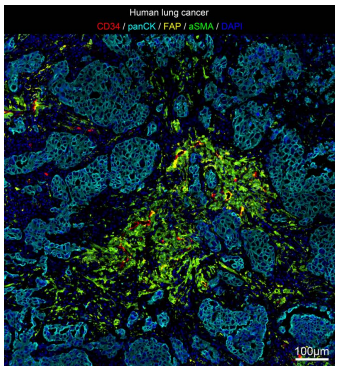

Fig3: mIHC analysis of human lung cancer tissue (Formalin/PFA-fixed paraffin-embedded sections) with CD34 (IRS024), panCK (IRS010), FAP and aSMA (IRS012) antibody at 1/100 dilution. The immunostaining was performed with the IRISKit® HyperView mTSA Kit (MH900206). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 30 mins at 95℃. DAPI (blue) was used as a nuclear counter stain. Image acquisition was performed with Olympus VS200 Slide Scanner.

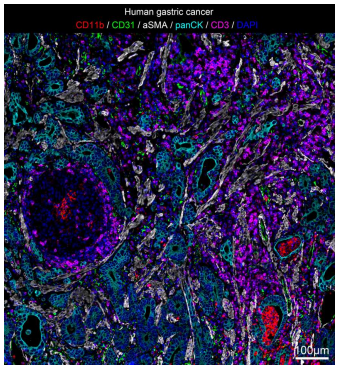

Fig4: mIHC analysis of human gastric cancer tissue (Formalin/PFA-fixed paraffin-embedded sections) with CD11b (IRS014), CD31 (IRS023), aSMA (IRS012), panCK (IRS010) and CD3 (IRS022) antibody at 1/100 dilution. The immunostaining was performed with the IRISKit® HyperView mTSA Kit (MH900206). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 30 mins at 95℃. DAPI (blue) was used as a nuclear counter stain. Image acquisition was performed with Olympus VS200 Slide Scanner.

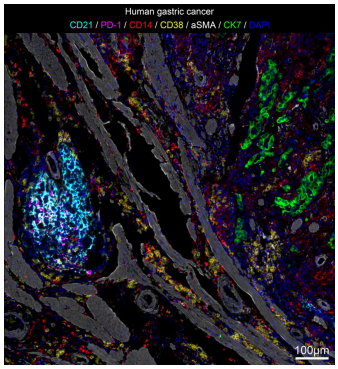

Fig5: mIHC analysis of human gastric cancer tissue (Formalin/PFA-fixed paraffin-embedded sections) with CD21 (IRS019), PD-1, CD14 (IRS015), CD38 (IRS006), aSMA (IRS012) and CK7 (IRS029) antibody at 1/100 dilution. The immunostaining was performed with the IRISKit® HyperView mTSA Kit (MH900206). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 30 mins at 95℃. DAPI (blue) was used as a nuclear counter stain. Image acquisition was performed with Olympus VS200 Slide Scanner.

Background References

1. Izumi D et al. CXCL12/CXCR4 activation by cancer-associated fibroblasts promotes integrin 1 clustering and invasiveness in gastric cancer. Int J Cancer 138:1207-19 (2016).
2. Chung SI et al. Development of a transgenic mouse model of hepatocellular carcinoma with a liver fibrosis background. BMC Gastroenterol 16:13 (2016).